Health Science Journal of Indonesia
Volume 12, number 1 June 2021, pages 1-65, ISSN 2087-7021

TABLE OF CONTENT

Editorial Note		iii-iv
A. R. Diyo **N. T. Budiman** **N. O. Christian** **R. Pratama**	**Characteristics of pediatric traumatic brain injury: study from Wongsonegoro Regional Public Hospital in Semarang** This study provides an overview of traumatic brain injury in children and shows the importance of enforcing driving rules and supervision by parents which play an important role in child safety.	1-5
I. Saptarini **N. Novianti** **A. Rizkianti** **I. B. Maisya**	**Stigma during COVID-19 pandemic among healthcare workers in greater Jakarta metropolitan area: a cross-sectional online study** There was any stigmatization among healthcare workers in Greater Jakarta Metropolitan Area.	6-13
P. A. Sitompul **N. Mariana** **A. Rusli** **T. Sundari** **R. Marlina** **F. Matondang** **H. D. Faisal**	**First experience of using favipiravir in the first healthcare worker patient with moderate case of Coronavirus Disease 2019 (COVID-19) at Sulianti Saroso Infectious Disease Hospital, Jakarta, Indonesia: a case report** This case highlights that considering the use of emergency intervention outside of clinical trial in the COVID-19 population, the informed patient consent has been given and the use of emergency intervention was monitored.	14-19
N. R. Ridha **B. Fikri** **R. Rahimi** **A. Laompo** **C. Tanjung** **D. Daud**	**Do the acute lymphoblastic leukemia and non-hodgkin lymphoma patients have a worse prognosis of COVID-19 infection in children?: a case report** Our case series of four pediatric cancer patients showed a good outcome after prompt treatment, suggesting that malignancy in children may not be a contributor factor for COVID-19 recovery.	20-25
E. Purnomo **N. I. Arovah** **A. Purnamasari**	**The association between anthropometric profiles and somatotype with 100 meter sprint amongst Indonesian sprint athletes** Most of the athletes representing Indonesia at the ASEAN University Games were mesomorphs and ectomorphs.	26-32
H. Herqutanto **A. Wijaya** **B. Sampurna** **M. F. L. Napitulu** **F. Afian**	**Do the port health officers at Soekarno-Hatta International Airports and Zainuddin Abdul Madjid International Airports have sufficient knowledge, attitude, and practice regarding emergency landing?** The level of knowledge of SOETTA and ZAM PHO officers regarding emergency landings was sufficient.	33-38
E. Indriasih **M. P. Budiharsana**	**Performance of the tariff method and physicians in determining stroke as the cause of deaths using verbal autopsy in areas with a limited number of physicians: cases in Indonesia** The performance of the Tariff method for stroke was almost similar with PCVA, and with a narrower variation, or more consistent than PCVA.	39-46

G. W. Permatasari **D. H. Utomo** **D. Purwaningroom** **D. Soeatmadji**	**The correlation of structural and binding affinity of insulin analog to the onset of action for diabetic therapy** Our finding revealed that the strength of insulin analogs towards insulin receptors is identic with its rapid mechanism in the human body.	47-55
L. Tana **D. Delima** **N. Kusumawardani** **L. Indrawati**	**Helmet use behavior and its relation to head injury of road traffic accident in Indonesia (Basic Health Research, 2018)** Helmet use behavior is connected with the reduction of head injuries due to traffic accidents. Counseling and monitoring of helmet use is need to be improved, especially for the youth category.	56-65

Health Science Journal of Indonesia

Editorial Board:
Editor-in-chief: Vivi Setiawaty; ***Deputy Editor-in-chief***: Ni Ketut Aryastami.
Editors: Laurentia Konadi, Ondri Dwi Sampurno, Pandji Wibawa Dhewantara, Betty Roosihermiatie, Grace Wangge, Agus Suwandono, Trihono.
Executive Editors: Cahaya Indriaty, Leny Wulandari, Kurniatun Karomah, Tetrian Widiyanto, Zulfah Nur'aini, Rini Sekarsih.
Printed by Badan Penerbit Fakultas Kedokteran Universitas Indonesia.
Subscription: The journal is published bi-annually and should be subscribed for a full year
Advertisement: Only advertisements of health science or related products will be allowed space in this journal. For inquiry please contact Health Science Journal of Indonesia Editorial Office at Badan Litbangkes, Jln. Percetakan Negara No. 29 Jakarta Pusat 10560, Indonesia; Tel (62-21) 4261088. Fax (62-21) 4244228.
E-mail: hsji.indonesia@gmail.com.
Published by: Lembaga Penerbit Balitbangkes, National Institute of Health Research and Development (NIHRD) Ministry of Health Indonesia.
Accrediting number: 1391/E/2016

Editorial Note

Traumatic brain injury is one of the leading causes of morbidity and mortality in the world[1]. For children, the common cause of traumatic brain injury for those aged 14 years and below is falling and those aged above 14 years is traffic accidents. A previous study at Cipto Mangunkusumo Hospital, Jakarta showed 503 pediatric traumatic brain injury cases aged 14 years and below from January 2004 to July 2005. They had mostly minor head injury and did not require hospitalization[2]. Data of pediatric traumatic brain injury in Indonesia are few. A retrospective study at Wongsonegoro Hospital, Semarang from January 2017 to December 2019 among 296 pediatric traumatic brain injury cases was to elaborate age and sex distribution, cause and type of traumatic brain injury, treated in operative room or not, length of hospitalization.

Meanwhile, dr. Soetomo General Hospital, Surabaya reported an average of 1178 traumatic brain injury cases per year from 2009 to 2013, with 6.1-11.2% mortality rates, whereas Hasan Sadikin Hospital, Bandung reported an incidence of 3578 traumatic brain injury cases from 2008-2010[3]. Moreover, the Indonesia Basic Heath Research showed prevalence of injuries increased from 7.5% in 2007 to 9.2% in 2018. The Basic Heath Research 2018 showed the main cause of injuries (40.6%) motorcycle accidents and mosly (42.8%) in the highway. Use of helmets in motorcycle accidents had a less intracranial injury[4]. Analysis of the Basic Health Research 2018 among those aged 5 years and above was to determine helmet use behaviors, incidence of head injuries due to traffic accidents, risk of not using helmet and head injuries.

Novel Coronavirus disease (COVID-19), which firstly reported from Wuhan, China in 2019 become a pandemic disease. It leads to a new global risk to human health. Working with potentially contagious patients elicits a wide variety of feelings, values, biases, stereotypes, and stigmas. Stigma has arisen since specific populations are targeted as the reason for COVID-19 pandemic[5]. A study will elucidate healthcare workers' stigma (personalized stigma, disclosure concerns, concerns about public attitudes, negative self-image) and place of works in high populated Greater Jakarta Metropolitan Areas.

During the early COVID-19 pandemic, there was no approved and definitive drugs for the treatment. Favipiravir, chloroquine, hydroxychloroquine were used for re-purposing the COVID-19 drugs. This was a 38 year woman of health worker case diagnosed moderate COVID-19 who given favipiravir and hydroxychloroquine treatment at the first time at an Infectious Disease Hospital, Jakarta. It presented the clinical characteristics, chest X-ray, laboratory profiles, and clinical outcomes of the moderate type COVID-19.

Although children infected with COVID-19 are small portion of the confirmed cases, children with tumors or autoimmune diseases are more susceptible, because of suppression of their immune system, chemotherapy, radiotherapy, or surgery on tumors[6]. This was case study of three Acute Lymphoblastic leukemia and one Non-Hodgkin lymphoma pediatric patients infected with moderate to severe COVID-19 at Dr Wahidin Sudirohusodo Hospital, Makassar from July to August 2020. They were the first four COVID-19 cases identified at this hospital that might be transmitted the infection during hospitalization. All of the four pediatric cancer patients showed good outcomes from COVID-19 infection after combination of therapies against virus, bacteria, and also respiratory support.

The physical profile of athletes needs to be possessed by each parent sport. Furthermore, it needs somatotype as a state quantification description of an individual athlete morphological status. There were two important anatomical predictors of 100 m running performance of anthropometry and somatotype. Here, it determined the association between anthropometric profiles and somatotype among 100 meter sprint Indonesian athletes.

Emergency landing is one of airport emergencies that range from an imminent threat to safety and operation of the aircraft to the sudden need for passengers or crew to land immediately on the ground such as a medical emergency[7,8]. Emergency landing as an airport emergency requires quick and precise action by Port Health Office (PHO) as the medical coordinator. Medical treatment in an emergency landing is critical for the safety of disaster victims, based on the knowledge, attitudes and behavior of airport PHO officers. This study showed sufficient knowledge, positive attitutes, and good behavior of emergency landing among PHO officers at Soekarno-Hatta International Airport, Cengkareng and Zainuddin Abdul Majid International Airport Batam.

As a developing country, Indonesia has not fulfilled the WHO's minimum threshold of 23 physicians, nurses and midwives per 10,000 population[9]. Here, physician-certified verbal autopsy (PCVA) is a method used to determine the cause of death. Though, it was costly and problematic where physicians are not widely available and with most deaths occur at home. The study is to validate the tariff method for stroke to the PCVA. Medical records of 298 adult deaths in four teaching hospitals in Jakarta from January 2015 to March 2017 were collected prospectively. Verbal autopsy (VA) using the WHO instrument year 2014 diagnosed by a trained physician (PCVA) was compared to tariff method. The sensitivity, specificity and positive predictive value (PPV) of VAs using physician's diagnosis (PCVA) for stroke were similar to the tariff method. The tariff method is a potential alternative to be used on a large scale, because of difficult geographical conditions where physicians are not widely available for determining causes of deaths.

Insulin analog manufacturing has been upgraded and the production of human insulin using recombinant DNA has become common. Insulin analogs are synthetically produced insulin variants that differ from those of native human insulin in the amino acid chain[10]. The insulin analog has two modes of operating time as fast and long acting. There are five types of insulin analog sequences including Aspart, Glargine, Detemir, Lispro and Degludec which aligned to each other. The study considers whether the insulin analogs' mode of action is related to its amino acid composition as well as its protein structure. They were grouped and clustered the sequence by alignment to identify the closeness and sequence similarity between samples. Then, they were analyzed of superimposing and identified binding affinity by a docking analysis approach. It reveals that the strength of insulin analogs towards insulin receptors is identic with its rapid mechanism in the human body.

References:

1. Dewan MC, Mummareddy N, Wellons JC, Bonfield CM. Epidemiology of global pediatric traumatic brain injury: qualitative review. World Neurosurgery. 2016;91:498
2. Dewi MR, Mangunatmadja I, Ramli Y. Karakteristik klinis trauma kepala pada anak di RS Dr. Cipto Mangunkusumo Jakarta. Sari Pediatri. 2016;9(5):354-8
3. Moya Zamzami N, Fuadi I, Nawawi AM. Angka kejadian dan outcome cedera otak di RS. Hasan Sadikin Bandung Tahun 2008-2010. JNI. 2013;2(2):89–94.
4. Kim S, Ro YS, Shin SD, Song KJ, Hong KJ, Jeong J. Preventive effects of motorcycle helmets on intracranial injury and mortality from severe road traffic injuries. Am J Emerg Med. 2018 Feb;36(2):173-178. doi: 10.1016/j. ajem.2017.07.044. Epub 2017 Jul 15.
5. Organization WH. A guide to preventing and addressing social stigma associated with COVID-19. Vol. 24, Retrieved May. 2020
6. Al-Quteimat OM, Amer AM. The impact of the COVID-19 pandemic on cancer patients. Am J Clin Oncol. 2020;1-4.
7. Ministry of Transportation. Pedoman penyusunan dokumen rencana penanggulangan keadaan darurat di Bandar Udara. Jakarta: The Institute; 2016. Indonesian.
8. United States. Department of Transportation. Airport emergency plan. Maryland: The Institute; 2010.
9. WHO. Achieving the health-related MDGs. It takes a workforce! [Internet]. WHO. 2018 [cited 2018 Apr 3]. Available from: http://www.who.int/hrh/ workforce_mdgs/en/
10. Chouhan R, Goswami S, Bajpai AK. Recent advancements in oral delivery of insulin: From challenges to solutions. In: Nanostructures for Oral Medicine. Elsevier Inc.; 2017:409-33.

ISSN 2087-7021
E-ISSN 2338-3437

Health Science Journal of Indonesia
Volume 12, number 1, June 2021, pages 1-65

Lembar abstrak ini boleh diperbanyak/di-copy tanpa izin

WL 354

Andrew Robert Diyo, Nadisa Tiofunda Budiman, Natashia Olivia Christian, Riky Pratama

Characteristics of pediatric traumatic brain injury: study from Wongsonegoro Regional Public Hospital in Semarang

Health Science Journal of Indonesia 2021; 12;1-5

Latar belakang: Cedera kepala merupakan salah satu penyebab utama morbiditas dan mortalitas di dunia, serta disabilitas pada kelompok pediatri. Penelitian ini bertujuan untuk mendeskripsikan karakteristik pasien pediatri dengan cedera kepala, mengingat minimnya data cedera kepala pada anak di Indonesia.

Metode: Penelitian ini merupakan penelitian deskriptif-retrospektif di RSUD Wongsonegoro Semarang. Data diambil dari rekam medis pasien anak yang dirawat selama periode Januari 2017-Desember 2019 dengan menggunakan metode purposive sampling.

Hasil: Dari 296 pasien, sebagian besar merupakan laki-laki (59,13%; 66,30%). Berdasarkan kelompok umur, persentase tertinggi pada kelompok operatif terdapat pada kelompok remaja (11-18 tahun) (40,87%) dan pada kelompok non operatif terdapat pada kelompok usia 5-10 tahun (37,57%). Penyebab tersering cedera kepala pada pasien operatif yakni jatuh dari kendaraan bermotor (37,39%) sementara pada pasien non operatif penyebab tersering berupa jatuh saat bermain (32,60%). Jenis cedera kepala tersering pada pasien operatif adalah Epidural Hematoma (49,57%) dan pada pasien non-operatif berupa commotio cerebri (53,59%). Kebanyakan pasien mengalami cedera kepala ringan (75,65%; 81,22%). Sebagian besar pasien operatif dirawat selama 3-5 hari (64,35%) sedangkan mayoritas pasien non operatif dirawat selama 1-3 hari (72.37%) Dari semua subjek, mayoritas pasien sembuh dan dipulangkan.

Kesimpulan: Jatuh dari kendaraan bermotor merupakan jenis cedera kepala yang paling umum ditemukan dalam penelitian ini. Studi ini memberikan gambaran umum tentang cedera kepala pada anak dan menunjukkan pentingnya penegakan aturan dalam berkendara serta pengawasan oleh orang tua yang berperan penting dalam keselamatan anak.

Kata kunci: anak, cedera kepala, Indonesia

WC 506

Ika Saptarini, Novianti, Anissa Rizkianti, Iram Barida Maisya, Suparmi, Ginoga Veridona, Ning Sulistiyowati, Sudikno

Stigma during COVID-19 pandemic among healthcare workers in greater Jakarta metropolitan area: across-sectional online study

Health Science Journal of Indonesia 2021; 12;6-13

Latar belakang: COVID-19 yang bermula dari Wuhan telah menjadi pandemi global yang mengancam kesehatan umat manusia. Kurangnya informasi atau informasi yang salah mengenai COVID-19 dapat menyebabkan adanya stigmatisasi termasuk terhadap tenaga kesehatan. Penelitian ini menilai adanya stigmatisasi terhadap tenaga kesehatan selama pandemi COVID-19 di wilayah Jabodetabek.

Metode: Penelitian ini merupakan penelitian potong lintang dan dilakukan secara daring menggunakan Google Form di wilayah Jabodetabek. Tautan pengisian kuesioner disebarkan melalui media social seperti Whatsapp, Facebook, Twitter dan Instagram. Sampel studi adalah tenaga kesehatan yang tinggal di Jabodetabek dan melakukan praktik kesehatan. Stigma diukur menggunakan empat dimensi yaitu personized stigma, disclosure concerns, concerns about public attitudes dan negative self-image.

Hasil: Dimensi negative self-image merupakan dimensi yang paling dirasakan oleh tenaga kesehatan.

Lebih dari separuh tenaga kesehatan setuju bahwa selama pandemi COVID-19 mereka membahayakan keluarga mereka karena status mereka sebagai tenaga kesehatan. Stigma pada tenaga kesehatan yang bekerja di rumah sakit lebih tinggi disbanding tenaga kesehatan yang bekerja bukan di rumah sakit seperti puskesmas, klinik dan laboratorium.

Kesimpulan: Terdapat stigmatisasi pada petugas kesehatan di jabodetabek. Stigmatisasi lebih tinggi diantara petugas kesehatan yang bekerja di rumah sakit dibandingkan dengan mereka yang bekerja tidak di rumah sakit. Beberapa upaya yang perlu dilakukan untuk mengurangi stigmatisasi di kalangan petugas kesehatan, seperti memberikan informasi yang benar kepada masyarakat, melengkapi tenaga kesehatan dengan alat pelindung diri yang memadai, dan memberikan insentif kepada mereka secara berkala.

Kata kunci: stigma, COVID-19, tenaga kesehatan, jabodetabek

WC 506

Pompini Agustina Sitompul, Nina Mariana, Adria Rusli, Titi Sundari, Rosa Marlina, Faisal Matondang, Haruyuki Dewi Faisal, Mohammad Syahril

First experience of using favipiravir in the first healthcare worker patient with moderate case of Coronavirus Disease 2019 (COVID-19) at Sulianti Saroso Infectious Disease Hospital, Jakarta, Indonesia: a case report

Health Science Journal of Indonesia 2021; 12;14-9

Latar belakang: Periode awal pandemi Severe Acute Respiratory Syndrome Coronavirus 2 (SARSCoV-2), belum terdapat obat yang disetujui dan pasti tersedia untuk pengobatan COVID-19. Favipiravir,mchloroquine, hydroxychloroquine digunakan sebagai obat dengan indikasi baru yang sementara efektifitas dan keamanannya menjadi perhatian para petugas medis.

Penyajian kasus: Disini kami melaporkan kasus wanita umur 38 tahun, merupakan kasus pertama seorang tenaga kesehatan Rumah Sakit terdiagnosis Coronavirus Disease 2019 (COVID-19) dengan penggunaan terapi favipiravir untuk pertama kalinya di Rumah Sakit Pusat Infeksi Sulianti Saroso, Jakarta, Indonesia. Berikut ini kami gambarkan karakteristik klinis, hasil foto thorak, profil laboratorium dan proses terapi menggunakan favipiravir and hidroxychloroquine serta hasil akhir pada kasus COVID-19 derajat sedang.

Kesimpulan: Kasus ini menggaribawahi bahwa pertimbangan penggunaan kegawatdaruratan obat antivirus diluar uji klinis pada populasi pasien COVID-19, pasien telah memberikan persetujuan dan penggunaan obat-obat tersebut dimonitor.

Kata kunci: Covid-19, favipiravir, tenaga kesehatan, laporan kasus, Jakarta

WC 506

Nadirah Rasyid Ridha, Bahrul Fikri, Rahmawaty Rahimi, Amiruddin Laompo, Conny Tanjung, Dasril Daud, Nasrum Massi

Do the acute lymphoblastic leukemia and non-hodgkin lymphoma patients have a worse prognosis of COVID-19 infection in children?: a case report

Health Science Journal of Indonesia 2021; 12;20-25

Latar belakang: Covid-19 (Coronavirus disease 2019) adalah penyakit menular yang disebabkan oleh Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2). Anak yang menderita kanker atau penyakit autoimun lebih rentan tertular karena penurunan system kekebalan tubuh, dampak kemoterapi, radioterapi, atau operasi tumor.

Penyajian kasus: Kami melaporkan 3 pasien leukemia limfoblastik akut dan 1 pasien limfoma nonHodgkin yang terinfeksi Covid-19 sejak Juli-Agustus 2020. Kasus tersebut adalah 4 kasus pertama yang teridentifikasi Covid-19 di Rumah Sakit Dr. Wahidin Sudirohusodo. Kasus 1,2, dan 4 terdiagnosis positif Covid -19 derajat sedang, sedangkan kasus 3 tergolong berat. Mereka kemungkinan terinfeksi Covid-19 saat perawatan. Semua kasus dinyatakan sembuh dari Covid-19 setelah pemberian obat anti virus, antibiotik, dan alat bantu pernapasan.

Kesimpulan: Serial kasus dari 4 pasien kanker anak dengan outcome yang baik setelah pengobatan yang cepat mengindikasikan bahwa penyakit keganasan pada anak kemungkinan bukan faktor yang berkontribusi dalam kesembuhan Covid-19

Kata kunci: COVID-19, leukemia limfoblastik akut, limfoma non-hodgkin, Anak

QT 260

Eddy Purnomo, Novita Intan Arovah, Alfonsia Purnamasari

The association between anthropometric profiles and somatotype with 100 meter sprint amongst Indonesian sprint athletes

Health Science Journal of Indonesia 2021; 12;26-32

Latar belakang: Lari seratus meter dipengaruhi oleh berbagai faktor internal dan eksternal. Profil somatotipe dan antropometri diperkirakan merupakan salah satu diantara faktor yang dapat memprediksi kinerja. Tujuan dari penelitian ini adalah untuk menilai antropometri dan somatotipe yang diperoleh dari sampel pelari putra perguruan tinggi Indonesia dan menjelaskan potensi korelasi antara antropometri dan somatotype dengan lari 100 meter.

Metode: Tercatat 20 atlet sprinter terpilih sebagai perwakilan dari Indonesia di ASEAN University Games XVIII dengan rata-rata umur (20.0+0.92 tahun). Penilaian antropometri meliputi tinggi, berat badan, lipatan kulit (trisep, supra-spinale, subskapula, suprailiaka, abdomen, betis, paha depan dan dada), dua lebar bicondylar (humerus dan femur) dan dua lingkar (bisep dan femur). Penilaian somatotipe didasarkan dari metode Heath & Carter. Presentasi lemak tubuh dinilai sebagai persamaan yang ditentukan oleh Berzerk et al. (1963). Indeks Masa Tubuh dihitung dari masa tubuh yang dibagi dengan tinggi badan kuadrat (kg / m2). Matrix multikorelasi dan regresi linear sederhana digunakan untuk menilai potensi korelasi antara profil somatotipe dan antropometri dengan lari cepat 100 m.

Hasil: Rata-rata nilai ectomorph-mesomorph-endomorph adalah 3.40-4.08-0.84. BMI di angka 20.6+0.6, sedangkan presentasi lemak di angka 9.2+ 0.8. Tidak ada korelasi yang signifikan dan kemiringan regresi ditemukan antara somatotipe dan antropometri dengan lari 100 m.

Kesimpulan: Atlet yang mewakili Indonesia di ASEAN University Games sebagian besar mesomorph and ectomorph. Mereka memiliki presentasi lemak skor endomorph rendah. Syarat-syarat bentuk tubuh tidak berkaitan dengan lari 100 m. Investigasi lebih lanjut direkomendasikan untuk memperkuat temuan.

Kata kunci: antropometri, somatotipe, pelari

WB 105

Herqutanto, Albert Wijaya, Budi Sampurna, Manaor F.L. Napitulu, Ferdi Afian

Do the port health officers at Soekarno-Hatta International Airports and Zainuddin Abdul Madjid International Airports have sufficient knowledge, attitude, and practice regarding emergency landing?

Health Science Journal of Indonesia 2021; 12;33-38

Latar belakang: Emergency landing sebagai salah satu keadaan darurat bandara memerlukan tindakan yang cepat dan tepat oleh Kantor Kesehatan Pelabuhan (KKP) sebagai koordinator medis. Penangananmedis dalam emergency landing sangat menentukan keselamatan dan keamanan korban, yang berbasispada pengetahuan, sikap dan perilaku petugas KKP bandara. Penelitian ini bertujuan untuk mengetahui tingkat pengetahuan, sikap dan perilaku petugas KKP Bandara Internasional Soekarno-Hatta (SOETTA) dan Bandara Internasional Zainuddin Abdul Majid (ZAM) terhadap emergency landing.

Metode: Penelitian ini adalah sebuah studi obervasional dengan disain potong lintang. Sembilan puluh delapan petugas KKP dari 74 bandara SOETTA dan 24 bandara ZAM diambil datanya lewat kuesioner. dan selanjutnya dinilai pengetahuan, sikap dan perilaku terhadap emergency landing.

Hasil: Sebanyak 63,5% petugas KKP SOETTA memiliki pengetahuan yang cukup sementara 79,2% petugas ZAM meiliki pengetahuan yang tergolong cukup. Untuk hasil sikap petugas KPP SOETTA yang tergolong positif 67,6% sementara di ZAM sikap petugas KPP yang tergolong positif 54,16%. Untuk hasil perilaku petugas KPP SOETTA yang tergolong baik 55,4% sementara di ZAM perilaku petugas KPP yang tergolong baik 75%.

Kesimpulan: Tingkat pengetahuan petugas KKP SOETTA dan petugas KKP ZAM terhadap emergency landing tergolong cukup. Sikap petugas KKP SOETTA dan ZAM terhadap penanganan emergency landing positif. Perilaku petugas KKP SOETTA dan ZAM cukup baik terhadap emergency landing.

Kata kunci: emergency landing; petugas KKP; pengetahuan, sikap dan perilaku

QZ

Endang Indriasih, Meiwita P Budiharsana

Performance of the tariff method and physicians in determining stroke as the cause of deaths using verbal autopsy in areas with a limited number of physicians: cases in Indonesia

Health Science Journal of Indonesia 2021; 12;39-46

Latar Belakang: Autopsi verbal yang disertifikasi oleh dokter (PCVA) merupakan metode utama yang digunakan untuk memastikan penyebab kematian di Indonesia. Meskipun sangat mahal dan bermasalah untuk digunakan di daerah di mana dokter tidak banyak tersedia dan sebagian besar kematian terjadi di rumah. Metode Tarif telah diujicobakan untuk mendapatkan pendekatan alternatif yang tidak memerlukan dokter untuk menentukan penyebab kematian. Studi validasi ini menyajikan bagaimana Tarif menangkap kebenaran dan kekhasan gejala stroke dibandingkan dengan PCVA.

Metode: Rekam medis dari 298 kematian orang dewasa yang terjadi di empat rumah sakit studi di wilayah Jakarta pada 1 Januari 2015 hingga Maret 2017 dikumpulkan secara prospektif. Autopsi verbal (AV) dilakukan dengan menggunakan instrumen WHO 2014 yang didiagnosis oleh dokter terlatih (PCVA) dan metode Tarif. Validitas AV dinilai dengan membandingkan diagnosis PCVA dengan diagnosis metode Tarif, mengacu pada baku mutu.

Hasil: Sensitivitas, spesifisitas dan nilai prediksi positif (PPV) dari AV dengan diagnosis dokter (PCVA) untuk stroke adalah 73,9%, 73,5% dan 93,4%. Sensitivitas, spesifisitas, dan nilai prediksi positif (PPV) yang sesuai dari AV yang didiagnosis dengan metode Tariff adalah 75%, 61% dan 91%. Nilai prediksi negatif (NPV) dari kedua teknik itu rendah, masing-masing 35,6% dan 32,6%.

Kesimpulan: Untuk stroke, kinerja metode Tarif hampir sama dengan PCVA, dan dengan variasi yang lebih sempit, atau lebih konsisten dibandingkan PCVA. Oleh karena itu, untuk penyebab kematian dengan tanda dan gejala yang berbeda, metode Tarif merupakan alternatif potensial untuk digunakan dalam skala besar, di Indonesia dimana banyak wilayah dengan geografis sulit dan dokter tidak selalu tersedia.

Kata kunci: autopsi verbal, sensitifitas, spesifisitas, penentuan penyebab kematian, dokter, metode tarif

WK 802

Galuh Wening Permatasari,n Didik Huswo Utomo, Dian Laila Purwaningroom, Djoko Soeatmadji

The correlation of structural and binding affinity of insulin analog to the onset of action for diabetic therapy

Health Science Journal of Indonesia 2021; 12;47-55

Latar belakang: Saat ini, produksi analog insulin meningkat dan menjadi popular. Keuntungan analog insulin telah ditinjau secara ekstensif dalam hal efektivitas dibandingkan dengan insulin manusia. Masingmasing industri analog insulin mengklaim keamanan dan kemanjurannya berdasarkan in vivo dan in vitro untuk mengatasi diabetes tipe 2. Kami melaporkan identifikasi insulin analog yang efektif berdasarkan struktur dan afinitas pengikatan secara komputasi, untuk mengonfirmasi potensi serta memberikan sudut pandang yang lebih luas kepada pengguna insulin analog.

Metode: Lima jenis analog insulin, Aspart, Glargine, Detemir, Lispro, dan Degludec, dianalisis. Kami membandingkan dan mengelompokkan urutan tersebut dengan penyelarasan untuk mengidentifikasi kedekatan dan kesamaan urutan antar sampel dilanjutkan dengan analisis superimpose dan melakukan identifikasi ikatan afinitas menggunakan pendekatan analisis docking

Hasil: Lispro memiliki kemiripan sekuen paling rendah dengan jenis lainnya, mendekati Aspart (96%) dan glargine (90,5%), sedangkan Determir dan Degludec menunjukkan kemiripan 100% sehingga kami menggunakan Degludec untuk analisis selanjutnya. Selain itu, Lispro, Aspart, dan Glargine menunjukkan kesamaan struktural yang diperkuat oleh rendahnya nilai signifikansi pada data RMSD. Perlu digaris bawahi bahwa Aspart memiliki skor afinitas pengikatan tertinggi (-66.1 +/- 7.1 kkal / mol) dalam analisis docking ke reseptor insulin (INSR) dan memiliki area pengikatan yang serupa dengan insulin manusia.

Kesimpulan: Penemuan kami mengungkapkan bahwa kekuatan insulin analog sejalan dengan laju mekanismenya di dalam tubuh manusia.

Kata kunci: Komputasi, Docking, Insulin analog, Kemiripan sekuen, Struktur

WL 354

Lusianawaty Tana, Delima, Nunik Kusumawardani, Lely Indrawati

Helmet use behavior and its relation to head injury of road traffic accident in Indonesia (Basic Health Research, 2018)

Health Science Journal of Indonesia 2021; 12;56-65

Latar belakang: Secara nasional, prevalensi cedera cenderung meningkat dari 7,5 % pada tahun 2007, 8,2 % pada 2013, dan 9,2 % pada 2018. Penyebab utama dari cedera adalah kecelakaan bermotor (40,6 %), dan kebanyakan terjadi di jalan raya (42,8 %). Ini merupakan analisis lanjut data Riset Kesehatan Dasar (Riskesdas) 2018 untuk menilai peran sosiodemografi terhadap perilaku penggunaan helm dan hubungan perilaku penggunaan helm dengan cedera kepala akibat kecelakaan lalu lintas.

Metode: Riskesdas 2018 adalah riset potong lintang. Data individu umur 5 tahun ke atas dianalisis dengan perilaku penggunaan helm dan kejadian cedera kepala akibat kecelakaan lalu lintas sebagai variabel terikat. Variabel bebas terdiri dari karakteristik sosiodemografi, peran individu dalam kecelakaan, dan dampak kecelakaan. Data dianalisis secara bivariat dan multivariat dengan memperhitungkan complex sample dan 5 % tingkat kepercayaan. Hasil: Hasil menunjukkan bahwa 44,4% dari 19.122 individu umur 5 tahun ke atas mempunyai perilaku yang baik dalam menggunakan helm. Determinan perilaku penggunaan helm adalah umur, jenis kelamin, pendidikan, pekerjaan, status ekonomi, lokasi dan area tempat tinggal (adjusted OR 1,15-4,5; p≤0,02). Sejumlah 14,1% individu mengalami cedera kepala akibat kecelakaan lalu lintas.Risiko cedera kepala pada individu yang tidak menggunakan helm sebesar 1,17 kali (95% CI 1,02—1,35; p 0,03) dibandingkan dengan individu yang menggunakan helm.

Kesimpulan: Perilaku penggunaan helm berhubungan dengan penurunan cedera kepala akibat kecelakaan lalu lintas. Penyuluhan dan pemantauan penggunaan helm perlu ditingkatkan terutama pada kelompok remaja.

Kata kunci: cedera kepala, kecelakaan lalu lintas, penggunaan helm

ISSN 2087-7021
E-ISSN 2338-3437

Health Science Journal of Indonesia
Volume 12, number 1, Januari 2021, pages 1-65

The abstract sheet may reproduced/copied without permission

WL 354

Andrew Robert Diyo, Nadisa Tiofunda Budiman, Natashia Olivia Christian, Riky Pratama

Characteristics of pediatric traumatic brain injury: study from Wongsonegoro Regional Public Hospital in Semarang

Health Science Journal of Indonesia 2021; 12;1-5

Background: Traumatic brain injury is one of the leading causes of morbidity and mortality in the world, as well as disability in the pediatric group. This study aimed to describe the characteristics of pediatric traumatic brain injury patients, considering the lack of data in Indonesia.

Methods: We conducted a descriptive-retrospective study at Wongsonegoro Regional Public Hospital Semarang. Data were extracted from medical records of patients admitted during the period of January 2017-December 2019 using a purposive sampling method.

Results: Out of 296 patients, most of the patients were male (59.13%; 66.30%). Based on age group, the highest percentage was found in the adolescent (11-18-year-old) (40.87%) in operative patients and 5-10-yearold (37.57%) in non-operative patients. The most common cause of traumatic brain injury in operative patients was falling from motor vehicle (37.39%) while in non-operative patients was falling while playing (32.60%). The most common type of injury in operative patients was epidural hematoma (49.57%) and in non-operative patients was brain concussion (53.59%). Most of the patients had minor head injury (75.65%; 81.22%). Most of operative patients spent 3-5 days (64.35%) in the hospital while most of non-operative patients spent 1-3 days (72.37%). Of all the subjects, the majority of patients recovered and discharged.

Conclusion: Falling from motor vehicle remains as the most common type of pediatric traumatic brain injury in this study. This study provides an overview of traumatic brain injury in children and shows the importance of enforcing driving rules and supervision by parents which play an important role in child safety.

Keywords: pediatric, traumatic brain injury, Indonesia

WC 506

Ika Saptarini, Novianti, Anissa Rizkianti, Iram Barida Maisya, Suparmi, Ginoga Veridona, Ning Sulistiyowati, Sudikno

Stigma during COVID-19 pandemic among healthcare workers in greater Jakarta metropolitan area: across-sectional online study

Health Science Journal of Indonesia 2021; 12;6-13

Background: COVID-19, which started in Wuhan, has become a global pandemic leading to a new global risk to human health. Lack of information or misinformation about COVID-19 can lead to stigmatization, including for health workers. This study aims to determine the stigmatization among health workers during the COVID-19 pandemic within the Greater Jakarta Metropolitan Area.

Methods: This study was a cross-sectional study conducted online using Google Forms in the Jabodetabek area. The questionnaire's link was distributed through social media, including Whatsapp, Facebook, Twitter, and Instagram. The study sample is health workers who live in Jabodetabek and carry out health practices. Stigma is measured using four dimensions: personalized stigma, disclosure concerns, public attitudes, and negative self-image.

Result: The negative self-image dimension is the dimension most felt by health workers. More than half of health workers agreed that during the

COVID-19 pandemic, they put their families at risk because of their status as health workers. The stigma of health workers who work in hospitals is higher than that of non-hospital health workers, such as health centers, clinics, and laboratories.

Conclusion: There was any stigmatization among healthcare workers in Greater Jakarta Metropolitan Area. Stigmatization was higher among healthcare workers who work in hospitals compared to those who work in nonhospitals. Some efforts should be made to reduce stigmatization among health workers, such as provide correct information to the public, equip health personnel with adequate personal protective equipment, and give incentives periodically to the health workers.

Keywords: stigma, COVID-19, healthcare workers, Greater Jakarta Metropolitan Area

WC 506

Pompini Agustina Sitompul, Nina Mariana, Adria Rusli, Titi Sundari, Rosa Marlina, Faisal Matondang, Haruyuki Dewi Faisal, Mohammad Syahril

First experience of using favipiravir in the first healthcare worker patient with moderate case of Coronavirus Disease 2019 (COVID-19) at Sulianti Saroso Infectious Disease Hospital, Jakarta, Indonesia: a case report

Health Science Journal of Indonesia 2021; 12;14-19

Background: During the early period of the Severe Acute Respiratory Syndrome Coronavirus 2 (SARSCoV-2) pandemic, there was no approved and definitive drug available for the treatment of COVID-19. Favipiravir, chloroquine, hydroxychloroquine was used for re-purposing drugs while their efficacy and safety remained a major concern for healthcare workers. Clinical trial to assess efficacy and safety were on going.

Case presentation: We present here the case of a 38-year-old woman, the first case of a healthcare worker diagnosed with COVID-19 who had moderate type, including first experience treatment with favipiravir in Sulianti Saroso Infectious Disease Hospital, Jakarta, Indonesia. We present the clinical characteristics, chest X-ray, clinical laboratory profiles, the treatment process with favipiravir and hydroxychloroquine as well as the clinical outcome of moderate type COVID-19 patient.

Conclusion: This case highlights that considering the use of emergency intervention outside of clinical trial in the COVID-19 population, the informed patient consent has been given and the use of emergency intervention was monitored.

Keywords: COVID-19, favipiravir, medical worker, case report, Jakarta

WC 506

Nadirah Rasyid Ridha, Bahrul Fikri, Rahmawaty Rahimi, Amiruddin Laompo, Conny Tanjung, Dasril Daud, Nasrum Massi

Do the acute lymphoblastic leukemia and non-hodgkin lymphoma patients have a worse prognosis of COVID-19 infection in children?: a case report

Health Science Journal of Indonesia 2021; 12;20-25

Background: Coronavirus Disease 2019 (COVID-19) is a contagious disease caused by a new type of Coronavirus namely Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2). Children with tumors or autoimmune diseases are more susceptible, because of suppression of their immune system, chemotherapy, radiotherapy, or surgery on tumors.

Case presentation: We present the clinical features 3 Acute Lymphoblastic leukemia and 1 Non-Hodgkin lymphoma patients who were infected with COVID-19 since July to August 2020 in our hospital. These were the first four cases identified as COVID-19 positive in Dr Wahidin Sudirohusodo Hospital. Case 1, 2, and 4 were diagnosed as moderate and common type of COVID-19, while case 3 was classified as severe type. They may be transmitted COVID-19 infection during hospitalization. All cases were recovered from COVID-19 after a combination therapy against virus, bacteria, and also respiratory support.

Conclusion: Our case series of four pediatric cancer patients showed a good outcome after prompt treatment, suggesting that malignancy in children may not be a contributor factor for COVID-19 recovery.

Keywords: COVID-19, acute lymphoblastic leukemia, non-hodgkin lymphoma, children

QT 260

Eddy Purnomo, Novita Intan Arovah, Alfonsia Purnamasari

The association between anthropometric profiles and somatotype with 100 meter sprint amongst Indonesian sprint athletes

Health Science Journal of Indonesia 2021; 12;26-32

Background: One hundred meter sprint was influenced by various internal and external factors. Somatotype and anthropometry profiles are possibly to be one of the factors that predicts performance. The aims of this study were to assess the anthropometry and somatotype profiles obtained from an example of Indonesian team university male sprinters and to elucidated potential correlations between anthropometry profile and somatotype with the 100m sprint.

Method: It was recorded that 20 selected sprint athletes participated as representatives from Indonesia in the XVIII ASEAN University Games with an averaged age (20.0 ± 0.92 year old). Anthropometric assessment includes height, weight, skinfold (triceps, supra-spinale, subscapula, suprailiaca, abdomen, calf, front thigh and chest)), two bicondylar widths (humerus and femur) and two circumferences (biceps and femur). The somatotype assessment was based on the Health & Carter method. Body fat percentage was assessed using the equation determined by Berzerk et al. (1963). Body Mass Index is calculated from body mass divided by height squared (kg/m2). Multicorrelation matrix and simple linear regression were used to assess the potential correlation between somatotype profile and anthropometry with the 100m sprint.

Result: The average value of ectomorph-mesomorph-endomorph was 3.40-4.08-0.84 BMI at 20.6 0.6, while the fat percentage was 9.2 ± 0.8. There were no significant correlation and regression slope found between somatotype profile and anthropometry with the 100m sprint.

Conclusion: Most of the athletes representing Indonesia at the ASEAN University Games were mesomorphs and ectomorphs. They had low endomorph score fat percentage. Body shape requirements was not related to the 100m sprint. Further investigation is recommended to amplify the findings.

Keyword: body composition, somatotype, sprinter

WB 105

Herqutanto, Albert Wijaya, Budi Sampurna, Manaor F.L. Napitulu, Ferdi Afian

Do the port health officers at Soekarno-Hatta International Airports and Zainuddin Abdul Madjid International Airports have sufficient knowledge, attitude, and practice regarding emergency landing?

Health Science Journal of Indonesia 2021; 12;33-38

Background: Emergency landing as an airport emergency requires quick and precise action by Port Health Office (PHO) as the medical coordinator. Medical treatment in an emergency landing is critical for the safety of disaster victims, based on the knowledge, attitudes and behavior of airport PHO officers. This study aimed to determine knowledge, attitude and behavior of PHO officers at Soekarno-Hatta International Airport (SOETTA) and Zainuddin Abdul Majid International Airport (ZAM) regarding emergency landings.

Methods: This is an observational study applying cross sectional design. Ninety-eight PHO officers from SOETTA airport and ZAM airport have participated, and their data was collected through questionnaires, and then analyzed based on knowledge, attitude, and practice toward emergency landing.

Results: The knowledge of SOETTA PHO officers was sufficient in 63.5% officers, while it was 79.2% in ZAM. SOETTA PHO officers' attitude was positive in 67.6% while in ZAM it was 54.16%. The behavior of SOETTA PHO officers was good in 55.4% officers while in ZAM it was 75%.

Conclusion: The level of knowledge of SOETTA and ZAM PHO officers regarding emergency landings was sufficient. The attitude of SOETTA and ZAM PHO officers regarding emergency landings was positive. The behavior of SOETTA and ZAM PHO officers was good for emergency landings.

Keywords: emergency landing, port health office, knowledge, attitudes and practice

QZ

Endang Indriasih, Meiwita P Budiharsana

Performance of the tariff method and physicians in determining stroke as the cause of deaths using verbal autopsy in areas with a limited number of physicians: cases in Indonesia

Health Science Journal of Indonesia 2021; 12;39-46

Background: Physician-certified verbal autopsy (PCVA) is the primary method used to determine the cause of death in Indonesia, although it is very costly and problematic to use in areas where physicians are not widely available with most deaths occur at home. The Tariff method has been piloted to obtain an alternative approach that does not require a physician to determine the cause of death**.** This validation study presents how the Tariff captures the correctness and distinctiveness of stroke symptoms to the PCVA.

Methods: Medical records of 298 adult deaths that occured in four teaching hospitals in the Jakarta from January 1, 2015 to March 2017 were collected prospectively. Verbal Autopsy (VA) was applied using the 2014 WHO instrument diagnosed by a trained physician (PCVA) and by Tariff method. The validity of the VA was assessed by comparing the PCVA diagnoses with the Tariff diagnoses, referring to the best standard.

Results: Sensitivity, specificity and positive predictive value (PPV) of VAs using physician's diagnosis (PCVA) for stroke were 73.9%, 73.5% and 93.4% respectively. The corresponding sensitivity, specificity and positive predictive value (PPV) of VAs diagnosed by the Tariff method were 75%, 61% and 91%. The negative predictive values (NPV) of both techniques were low, 35.6% and 32.6% respectively.

Conclusion: The performance of the Tariff method for stroke was almost similar with PCVA, and with a narrower variation, or more consistent than PCVA. Therefore, the Tariff method is a potential alternative to be used on a large scale, because the difficult geographical conditions where physician are not widely available for causes of deaths with distinct signs and symptoms.

Keywords: verbal autopsy, sensitivity, specificity, determining cause of death, physician, tariff method.

WK 802

Galuh Wening Permatasari,n Didik Huswo Utomo, Dian Laila Purwaningroom, Djoko Soeatmadji

The correlation of structural and binding affinity of insulin analog to the onset of action for diabetic therapy

Health Science Journal of Indonesia 2021; 12;47-55

Background: These days, insulin analog production has been improved and becoming popular. The advantages of insulin analog have been extensively reviewed in terms of effectiveness compared to human insulin. Each of the insulin analog industries has claimed their safety and efficacy based on in vivo and in vitro to overcome type 2 diabetes. Hereby, we report on the identification of highly effective analog-based insulin on structure and binding affinity computationally, to confirm its potential and give a broader point of view to insulin analog users.

Methods: Five types of insulin analogs, Aspart, Glargine, Detemir, Lispro and Degludec, were analyzed. We grouped and clustered the sequence by alignment to identify the closeness and sequence similarity between samples, continued by superimposing analysis and undertaking binding affinity identification utilizing of a docking analysis approach.

Results: Lispro had the least sequence similarity to other types, close to Aspart (96%) and Glargine (90.5%), while Detemir and Degludec showed 100% similarity we decide to only use Degludec for the next analysis. Furthermore, Lispro, Aspart, and Glargine exhibited structural similarity strengthened by the lack of significant difference in the RMSD data. Importantly, Aspart had the highest binding affinity score (-66.1 +/- 7.1 Kcal/mol) in the docking analysis to the insulin receptor (INSR) and similar binding site areas to human insulin.

Conclusion: Our finding revealed that the strength of insulin analogs towards insulin receptors is identic with its rapid mechanism in the human body.

Keywords: Computation, Docking, Insulin analog, Sequence similarity, Structure

WL 354

Lusianawaty Tana, Delima, Nunik Kusumawardani, Lely Indrawati

Helmet use behavior and its relation to head injury of road traffic accident in Indonesia (Basic Health Research, 2018)

Health Science Journal of Indonesia 2021; 12;56-65

Background: Nationally, the prevalence of injuries tends to increase from 7.5% in 2007, 8.2% in 2013, and 9.2% in 2018. The main cause of injuries is motorcycle accidents (40.6%), which most occur on the highway (42.8%). This is a further analysis of Indonesia Basic Health Research (Riskesdas) 2018 data, to assess the role of sociodemography on helmet use behavior and head injuries due to traffic accident.

Methods: The 2018 Basic Health Research was a cross-sectional research, based on data from individuals aged 5 years old and above, who analyzed with helmet use behavior and the incidence of head injuries due to traffic accident as dependent variables. The independent variables consist of sociodemographic characteristics, the role of individual in accident, and the impact of the accident. The data were analyzed by bivariate and multivariate, and taking into account the complex sample in 5% confidence level.

Results: The results showed that 44.4% from 19122 individuals aged five years old and above had good behavior in using helmets. The determinants of helmet use behavior were age, gender, education, occupation, economic status, location and area of residence (adjusted OR 1.15—4.5; p≤0.02). The result from14.1% of respondents who had a head injuries caused by traffic accidents. The risk of head injuries due to traffic accidents was 1.17 times (95% CI 1.02—1.35; p 0.03) in the unhelmeted group compared to the helmeted group.

Conclusion: Helmet use behavior is connected with the reduction of head injuries due to traffic accidents. Counseling and monitoring of helmet use is need to be improved, especially for the youth category.

Keywords: head injury, traffic accident, helmet use