Medical education in pandemic era

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Pandemic era COVID-19 has resulted in a revolution in medical education all over the world for both undergraduate and postgraduate. All clinical rotation for undergraduates and hospital residency has also been shortened. However, This pandemic also provides an excellent opportunity for medical educators to power information technology and posing lecturer and students for distance learning. All medical schools have quickly adapted to the online teaching with the shifting of live clinical exposure to the virtual one, such as online cases discussions, videos of clinical examinations, virtual simulators, tele-health, tele-education, etc. From a pedagogical perspective, medical students should be treated as junior doctors as a part of the healthcare team. Thus, students are subject to the same risks and duties. We don't know precisely when the pandemic will stop. Hence, our students will remain susceptible to this virus. We must remember that medical students are not under the same contractual obligations as healthcare workers. Therefore, the risks to the students' health might not outweigh the benefits. Consequently, we should train all medical students and residents to comply with personal protective equipment (PPE) and follow the health protocol. To acquire doctor competencies, students should be more active learners by implementing adult learning, self-directed learning, collaborative learning, etc. The most important thing is that we should trust each other and believe that students are still young and are more flexible and adaptive to these situations. Finally, medical education during pandemics remains controversial. Research that compares the risks and advantages of continuing hospital teaching for students versus virtual simulated teaching is needed to reach a definitive decision.
Keywords: education, medical, pandemic, student.

Immunization for the elderly: is it necessary?

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With increasing life expectancy, the global population ages, and the number of persons older than 60 years of age is expected to double by 2050. The severity of many infections is higher in the elderly compared to younger adults and infectious diseases are frequently associated with long-term sequelae such as impairments in activities of daily living, onset of frailty, or the loss of independence. Age-associated functional changes in the immune system. Both innate and adaptive immune systems undergo age-related alterations in terms of cell numbers and functions toward the later decades of human life. Despite this functional down-regulation at the cellular level, levels of pro-inflammatory cytokines and chemokines are elevated in circulation with advancing age. We can summarize that older adults' immune responses are slower, less coordinated, and less efficient, making older adults more susceptible to emerging infections. It is important to give vaccination to the elderly. Future vaccination strategies will need to elicit strong protective antibody responses in older adults, using age-appropriate adjuvants; anti-viral and immunomodulatory treatments are currently an area of intense study.
Keywords: vaccine, prevention, elderly, efficacy.

Changes in decisions on chemotherapy during Covid-19 pandemic

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Delivering the optimal cancer care during the COVID-19 crisis is challenging given the competing risks of death from cancer versus infection from SARS-CoV2, and the higher risk of death in immunocompromised patients. This presentation will discuss the influence of specific cancer on disease severity, issues related to balancing the risk from delaying chemotherapy, as well as reviews of the recommendations for cancer care during the COVID-19 pandemic from several expert groups. I will also share a glimpse of the perceptions of cancer patients on the changes in hospital policies since the pandemic.
Keywords: chemotherapy, oncology service, COVID-19, pandemic.

Ethical and legal dilemma in acquiring consent regarding handling of suspected Covid-19 body

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Background: COVID-19 death is defined as death resulting from an illness that is clinically compatible with a probable or confirmed COVID-19 case. This indicates that patients dying from probable COVID-19 or who died before reaching the hospital will be handled using the same protocol despite the lack of test result. Unfortunately, many relatives of the late refuse to giving approval for the handling of the body using COVID-19 body-handling protocol. Thus, it could rise conflict of ethical and legal obligations during clinical practice.
Objective: This review is analyzing an actual ethical and legal dilemma faced by health care workers especially who handled suspected COVID-19 dead body.
Methods: This is an analytical literature review with narrative approach.
Results: The ethical approach apply four quandrants analysis. The indications of handling suspected body according to COVID-19 protocol is the consideration

of public safety in regards of patient/family preferences. Religious rites according to the late belief is applied to maintain the quality of end of life care and respecting the common good of the community needs. Legal protection must be provided for hospital and healthcare workers for adhering to the safety protocol during a pandemic.

Conclusion: Handling of suspected COVID-19 body bear a dilematic ethical and legal responsibility. To acquire the autonomous consent of the patient must also respect the needs of public safety.

Keywords: body handling, consent, Covid-19, ethical dilemma, legal dilemma.

Genetics approach of infertility and failure of pregnancy

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Infertility is a complex disease of the reproductive system characterized by the inability to achieve pregnancy after more than 12 months of regular, unprotected sexual intercourse. Infertility in female can be caused by anatomical (uterine, tubal and pelvic abnormalities), endocrine, genetic (chromosomal abnormalities and gene mutation), endometriosis/ immune, infectious or psychogenic factors. However the main genetic factors in human reproductive disorders are the chromosome abnormalities. A significant proportion of infertile males with azoospermia and severe oligospermia have a genetic etiology for reproductive failure. Chromosomal abnormality mainly in sex chromosome can be easily identified using light microscopes such as Klinefelter syndrome with 46,XXY and other large Y chromosome deletion or translocation to autosome. The advanced molecular genetic techniques give an opportunity to identify new genetic causes of male infertility and to understand their affects on normal testicular functions. Many genes have been identified in infertile man such as SRY gene, AZF gene, genes related to disorders of sex development (DSD) namely AR gene, SF1 gene, ANOS1 gene (Kallmann syndrome) and many more genes still in progress for identification with panel genes on NGS. Primary female infertility includes premature ovarian failure (POF), polycystic ovary syndrome (PCOS) and endometriosis, while secondary infertility arises due to systemic or syndromic genetic defects. The diagnosis of recurrent miscarriage or recurrent pregnancy loss (RPL) is not made until a woman has lost three pregnancies. The risk of RPL in each patient is probably determined by the interaction of many genetic variants and environmental factors, but only few of these have so far been identified. Genetic studies suggest that RPL due to predominantly maternal causes with multifactorial background. A considerable proportion of RPL cases are caused by recurrent chromosomally abnormal conceptions. Almost 40-50% of all miscarriage is due to genetic abnormalities in the baby. These pregnancies are terminated by nature itself as a defense mechanism against the birth of abnormal babies. Chromosomal investigation of the couple may reveal abnormalities (only in 2-3 % of couple) in any of the parent. Most chromosomal abnormalities in carrier parent are balanced translocation or inversion without any abnormal clinical phenotype. In our experiences it quite often no chromosomal abnormality can be found in RPL, this is not indicated that there is no genetic abnormality in those cases since small chromosome abnormality (<4kb) cannot be detected using light microscope. A new various DNA techniques could determine small deletion or gene mutation and resolve much-unexplained miscarriage. Therefore in the counseling session care must be taken when informing the laboratory results, the term of normal chromosome should not be mentioned. Detailed information about the cause of the disorder, the pattern of inheritance, diagnostic procedure, and how to deal with the disease should be conveyed to patients and also their families. Genetic counselors work with patients struggling to become pregnant who desire preconception genetic testing, carrier screening and prenatal diagnosis either invasive (amniocentesis or chorionic villus sampling and preimplantation genetic diagnosis) or non invasive prenatal testing (NIPT). Many couples with infertility or reproductive disorders lead to decreased fertility have turned to assisted reproductive technology (ART) which is rarely available and costly. For these reason ART patients must be informed and must undergo a complete genetic screening and extensive genetic counseling.

Keywords: genetic, testing, endometriosis, procedure.