

SELECTED ABSTRACTS FROM PUBMED

1. Gassei K, Orwig KE. Experimental methods to preserve male fertility and treat male factor infertility. *Fertil Steril*. 2016 Feb;105(2):256-66. doi: 10.1016/j.fertnstert.2015.12.020. Epub 2015 Dec 30.

ABSTRACT

Infertility is a prevalent condition that has insidious impacts on the infertile individuals, their families, and society, which extend far beyond the inability to have a biological child. Lifestyle changes, fertility treatments, and assisted reproductive technology (ART) are available to help many infertile couples achieve their reproductive goals. All of these technologies require that the infertile individual is able to produce at least a small number of functional gametes (eggs or sperm). It is not possible for a person who does not produce gametes to have a biological child. This review focuses on the infertile man and describes several stem cell-based methods and gene therapy approaches that are in the research pipeline and may lead to new fertility treatment options for men with azoospermia.

Keywords: Fertility; azoospermia; culture; de novo testicular morphogenesis; gene therapy; grafting; infertility; stem cells; transplantation.

2. Gisladdottir A, Luque-Fernandez MA, Harlow BL, Gudmundsdottir B, Jonsdottir E, Bjarnadottir R, Hauksdottir A, Aspelund T, Cnattingius S, Valdimarsdottir UA. Obstetric Outcomes of Mothers Previously Exposed to Sexual Violence. *PLoS One*. 2016 Mar 23;11(3):e0150726. doi: 10.1371/journal.pone.0150726. eCollection 2016.

ABSTRACT

Background: There is a scarcity of data on the association of sexual violence and women's subsequent obstetric outcomes. Our aim was to investigate whether women exposed to sexual violence as teenagers (12-19 years of age) or adults present with different obstetric outcomes than women with no record of such violence.

Methods: We linked detailed prospectively collected information on women attending a Rape Trauma Service (RTS) to the Icelandic Medical Birth Registry (IBR). Women who attended the RTS in 1993-2010 and delivered (on average 5.8 years later) at least one singleton infant in Iceland through 2012 formed our exposed cohort (n = 1068). For each exposed woman's delivery, nine deliveries by women with no RTS attendance were randomly selected from the IBR (n = 9126) matched on age, parity, and year and season of delivery. Information on smoking and Body mass index (BMI) was available for a sub-sample (n = 792 exposed and n = 1416 non-exposed women). Poisson regression models were used to estimate Relative Risks (RR) with 95% confidence intervals (CI).

Results: Compared with non-exposed women, exposed women presented with increased risks of maternal distress during labor and delivery (RR 1.68, 95% CI 1.01-2.79), prolonged first stage of labor (RR 1.40, 95% CI 1.03-1.88), antepartum bleeding (RR 1.95, 95% CI 1.22-3.07) and emergency instrumental delivery (RR 1.16, 95% CI 1.00-1.34). Slightly higher risks were seen for women assaulted as teenagers. Overall, we did not observe differences between the groups regarding the risk of elective cesarean section (RR 0.86, 95% CI 0.61-1.21), except for a reduced risk among those assaulted as teenagers (RR 0.56, 95% CI 0.34-0.93). Adjusting for maternal smoking and BMI in a sub-sample did not substantially affect point estimates.

Conclusion: Our prospective data suggest that women with a history of sexual assault, particularly as teenagers, are at increased risks of some adverse obstetric outcomes.

3. Budak YU, Polat M, Huysal K. The use of platelet indices, plateletcrit, mean platelet volume and platelet distribution width in emergency non-traumatic abdominal surgery: a systematic review. *Biochem Med (Zagreb)*. 2016;26(2):178-93. doi: 10.11613/BM.2016.020.

ABSTRACT

Platelet indices (PI) -- plateletcrit, mean platelet volume (MPV) and platelet distribution width (PDW) -- are a group of derived platelet parameters obtained as a part of the automatic complete blood count. Emerging evidence suggests that PIs may have diagnostic and prognostic value in certain diseases. This study aimed to summarize the current scientific knowledge on the potential role of PIs as a diagnostic and prognostic marker in patients having emergency, non-traumatic abdominal surgery. In December 2015, we searched Medline/PubMed, Scopus and Google Scholar to identify all articles on PIs. Overall, considerable evidence suggests that PIs are altered with acute appendicitis. Although the role of PI in the differential diagnosis of acute abdomen remains uncertain, low MPV might be useful in acute appendicitis and acute mesenteric ischemia, with high MPV predicting poor prognosis in

acute mesenteric ischemia. The current lack of consistency and technical standards in studies involving PIs should be regarded as a serious limitation to comparing these studies. Further large, multicentre prospective studies concurrently collecting data from different ethnicities and genders are needed before they can be used in routine clinical practice.

Keywords: acute appendicitis; acute cholecystitis; acute mesenteric ischemia; platelet indices; platelets.

4. Lu Q, Pei Y, Wu H, Wang Z, Zaiping J. Transcatheter aortic valve implantation with balloon-expandable valve: early experience from China. *Rev Bras Cir Cardiovasc.* 2015 Jul-Aug;30(4):425-32. doi: 10.5935/1678-9741.20150054.

ABSTRACT

Objective: The aim of the current study was to evaluate the early experience of the application of transcatheter aortic valve implantation with the balloon-expandable system in China. The transcatheter aortic valve implantation technology has been widely used for patients with inoperable severe aortic stenosis in the developed world. The application of transcatheter aortic valve implantation is still in the early stages of testing in China, particularly for the balloon-expandable valve procedure.

Methods: This was a retrospective study. All patients undergoing transcatheter aortic valve implantation with balloon-expandable system in our hospital between 2011 and 2014 were included. Edwards SAPIEN XT Transcatheter Heart Valve was used. The improvement of valve and heart function was evaluated as well as 30-day mortality and major complications according to the VARC-2 definition.

Results: A total of 10 transcatheter aortic valve implantation procedures with the balloon-expandable system were performed in our hospital, of which 9 were transfemoral and 1 was transapical. The median age was 76 years, and the median STS score and Logistic EuroSCORE (%) were 8.9 and 16.2. The implantation was successfully conducted in all patients, only 2 patients had mild paravalvular leak. There was no second valve implantation. Moreover, no 30-day mortality or complications was reported. Following the transcatheter aortic valve implantation procedure, the heart and valve functions had improved significantly. During the follow-up period of 3-34 months, one patient died of lung cancer 13 months after the operation.

Conclusion: This early experience has provided preliminary evidence for the safety and efficacy of transcatheter aortic valve implantation procedure with the balloon-expandable system in the developing world with an increasing aging population.

5. Heron M. Deaths: Leading Causes for 2013. *Natl Vital Stat Rep.* 2016 Feb 16;65(2):1-95.

ABSTRACT

Objectives: This report presents final 2013 data on the 10 leading causes of death in the United States by age, sex, race, and Hispanic origin. Leading causes of infant, neonatal, and postneonatal death are also presented. This report supplements "Deaths: Final Data for 2013," the National Center for Health Statistics' annual report of final mortality statistics.

Methods: Data in this report are based on information from all death certificates filed in the 50 states and the District of Columbia in 2013. Causes of death classified by the International Classification of Diseases, Tenth Revision (ICD-10) are ranked according to the number of deaths assigned to rankable causes. Cause-of-death statistics are based on the underlying cause of death.

Results: In 2013, the 10 leading causes of death were, in rank order: Diseases of heart; Malignant neoplasms; Chronic lower respiratory diseases; Accidents (unintentional injuries); Cerebrovascular diseases; Alzheimer's disease; Diabetes mellitus; Influenza and pneumonia; Nephritis, nephrotic syndrome and nephrosis; and Intentional self-harm (suicide). They accounted for 74% of all deaths occurring in the United States. Differences in the rankings are evident by age, sex, race, and Hispanic origin. Leading causes of infant death for 2013 were, in rank order: Congenital malformations, deformations and chromosomal abnormalities; Disorders related to short gestation and low birth weight, not elsewhere classified; Newborn affected by maternal complications of pregnancy; Sudden infant death syndrome; Accidents (unintentional injuries); Newborn affected by complications of placenta, cord and membranes; Bacterial sepsis of newborn; Respiratory distress of newborn; Diseases of the circulatory system; and Neonatal hemorrhage. Important variations in the leading causes of infant death are noted for the neonatal and postneonatal periods.

- Kirk MD, Pires SM, Black RE, Caipo M, Crump JA, Devleeschauwer B, Döpfer D, Fazil A, Fischer-Walker CL, Hald T, Hall AJ, Keddy KH, Lake RJ, Lanata CF, Torgerson PR, Havelaar AH, Angulo FJ. World Health Organization Estimates of the Global and Regional Disease Burden of 22 Foodborne Bacterial, Protozoal, and Viral Diseases, 2010: A Data Synthesis. *PLoS Med.* 2015 Dec 3;12(12):e1001921. doi: 10.1371/journal.pmed.1001921. eCollection 2015.

Erratum in

Correction: World Health Organization Estimates of the Global and Regional Disease Burden of 22 Foodborne Bacterial, Protozoal, and Viral Diseases, 2010: A Data Synthesis. [PLoS Med. 2015]

ABSTRACT

Background: Foodborne diseases are important worldwide, resulting in considerable morbidity and mortality. To our knowledge, we present the first global and regional estimates of the disease burden of the most important foodborne bacterial, protozoal, and viral diseases.

Methods and Findings: We synthesized data on the number of foodborne illnesses, sequelae, deaths, and Disability Adjusted Life Years (DALYs), for all diseases with sufficient data to support global and regional estimates, by age and region. The data sources included varied by pathogen and included systematic reviews, cohort studies, surveillance studies and other burden of disease assessments. We sought relevant data circa 2010, and included sources from 1990-2012. The number of studies per pathogen ranged from as few as 5 studies for bacterial intoxications through to 494 studies for diarrheal pathogens. To estimate mortality for *Mycobacterium bovis* infections and morbidity and mortality for invasive non-typhoidal *Salmonella enterica* infections, we excluded cases attributed to HIV infection. We excluded stillbirths in our estimates. We estimate that the 22 diseases included in our study resulted in two billion (95% uncertainty interval [UI] 1.5-2.9 billion) cases, over one million (95% UI 0.89-1.4 million) deaths, and 78.7 million (95% UI 65.0-97.7 million) DALYs in 2010. To estimate the burden due to contaminated food, we then applied proportions of infections that were estimated to be foodborne from a global expert elicitation. Waterborne transmission of disease was not included. We estimate that 29% (95% UI 23-36%) of cases caused by diseases in our study, or 582 million (95% UI 401-922 million), were transmitted by contaminated food, resulting in 25.2 million (95% UI 17.5-37.0 million) DALYs. Norovirus was the leading cause of foodborne illness causing 125 million (95% UI 70-251 million) cases, while *Campylobacter* spp. caused 96 million (95% UI 52-177 million) foodborne illnesses. Of all foodborne diseases, diarrheal and invasive infections due to non-typhoidal *S. enterica* infections resulted in the highest burden, causing 4.07 million (95% UI 2.49-6.27 million) DALYs. Regionally, DALYs per 100,000 population were highest in the African region followed by the South East Asian region. Considerable burden of foodborne disease is borne by children less than five years of age. Major limitations of our study include data gaps, particularly in middle- and high-mortality countries, and uncertainty around the proportion of diseases that were foodborne.

Conclusions: Foodborne diseases result in a large disease burden, particularly in children. Although it is known that diarrheal diseases are a major burden in children, we have demonstrated for the first time the importance of contaminated food as a cause. There is a need to focus food safety interventions on preventing foodborne diseases, particularly in low- and middle-income settings.