

PP35 Defecography (Evacuation Proctography) For The Evaluation Of Pelvic Floor Disorders: A Literature Review

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Introduction. Pelvic floor diseases (PFD) often affect the adult population, with approximately 50 percent of women aged 50 years and older suffering from PFD. The condition has complex symptoms that may lead to stress and a negative impact on the quality of life. The USA spends about USD 1 billion annually on inpatient costs as a result of more than 700,000 emergency department visits and 50,000 hospitalizations associated with PFD. Defecography is currently the most commonly used method of diagnostic imaging used to evaluate PFD. This technology is not available in the Republic of Kazakhstan, despite its high diagnostic value.

Methods. In order to assess the clinical effectiveness of defecography, we have conducted a literature search in the MEDLINE database. We selected articles with pairwise comparisons of defecography with other tests: anorectal manometry; balloon expulsion test; electromyography; magnetic resonance imaging (MRI); and, ultrasound.

Results. The findings are primarily based on two meta-analysis (91 studies representing 10,768 cases). The results have been evaluated according to the detection frequency and omission of the following signs: cystocele, middle compartment descent, rectocele, intussusception, rectal prolapse, enterocele, and perineal descent. The literature review did not reveal significant difference in diagnostic value between MR defecography and defecography based on X-ray. However, the imaging endpoints (detection rate of structural and functional abnormalities) for defecography based on X-ray were significantly better than plain radiography.

Conclusions. The defecography is currently considered the gold standard and the most commonly used tool of diagnosis. The implementation does not require an expensive equipment purchase (MR defecography) and is reproducible on conventional X-ray equipment if the necessary inventory is available.

PP36 Joint Replacement Under Computer Navigation And Robotic Systems

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Introduction. Osteoarthritis (OA) is a heterogeneous group of diseases of various etiologies based on the defeat of all components of the joint. OA is one of the main causes of disability in older people. To date, joint replacement is the most clinical and cost-effective method of the terminal stage treatment. The short and long-term success of total joint replacement is closely related to the accuracy of the prosthesis implantation. Published studies show that the accuracy of prosthesis implantation can be intraoperatively controlled by computed navigation and robotic systems better than by traditional methods.

Methods. In order to assess the clinical effectiveness of the technologies, we have conducted a literature search in the MEDLINE database. We included studies that reported a comparison of outcomes between conventional methods, computer navigation and robot-assisted surgery.

Results. The results of this literature review are based on six systematic reviews with meta-analyses (101 studies representing 482,367 cases) and one national joint replacement registry. The outcomes compared included Knee Society Score (KSS)-function, alignment correction, mechanical axis (varus and valgus deviation $>3^\circ$), prosthesis positioning, soft tissues balancing and functional outcomes. Thus, the cumulative success rate in the computed navigation and robotic systems group was reported to be 86.7 percent, which is crucial considering its lowered rate of revision (3%), correct mechanical axis ($\leq 3\%$) and functional status.

Conclusions. The literature review demonstrates a high potential of the computed navigation and robotics systems in the intraoperative monitoring of important surgical parameters for achieving the best intervention outcomes. All the clinical endpoints were significantly better by comparison with conventional method.

PP37 A Systematic Review of Machine Learning and Statistical Models For Predicting Coronary Heart Disease In Diabetic Patients

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