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HEALTH TECHNOLOGY ASSESSMENT OF FEMISCAN FOR URINARY INCONTINENCE MANAGEMENT: A SYSTEMATIC REVIEW AND META-ANALYSIS

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Background and aims: Urinary incontinence as a common problem especially for women effects on not only patient but family and society. Hence, considering this adversity, finding the best treatment with lowest side effect and cost can improve their quality of life. In this approach, Conservative intervention is the primary step in curing urinary incontinence. Based on the practice of biofeedback technology (femi scan) in the urinary incontinence with or without other conservative interventions in the recent years, we have been tried to evaluate the studies on the effectiveness of the mentioned technology in contrast to other medical interventions in this study.

Methods: In the present investigation first a systematic review on finding the studies over the evaluation of the biofeedback technology (Femiscan) was conducted. To reach this goal a comprehensive search in Medline (Ovid), PubMed (clinical queries), Cochrane Library (including CENTRAL, DARE, etc.), Scopus, CRD database, NIHR HTA, ProQuest and Embase bibliographic databases using the PICO based keywords was performed. Then, a retrieved study by means of two independent and expert reviewer during several steps (based on title, abstract and full-text, excluding of duplicated or unrelated cases) was chosen and non-qualified studies was exiled from the study. After that, 32 chosen randomized and non- randomized trial studies were evaluated by two experienced evaluators by Cochrane tool in terms of types of Bias. And eventually obtained data from the investigation was meta-analyzed by Revman5.2 software and safety, effectiveness and economical evaluation of the device was studied based on this data. The investigation was reconsidered by the Ministry of Health and Medical Education as the

presenting authorities and all expenses and side effects according to the study view and differences in the alternatives were identified and analyzed. To calculate the expenses of Femi-scan and Pelvic Muscle Floor Training (PFMT), Cost-Minimization Analysis was performed.

Results: From 33 final selected of articles 24 articles was related to women and 9 articles was concerned to the appropriate intervention in men. In general, the majority of female-related studies were moderate to good quality and weak to moderate for men-related studies. The results of the meta-analysis for the treatment of urinary incontinence in women using biofeedback therapeutic intervention along with pelvic floor muscle exercises compared to not using it during 1 to 12 months follow-up showed no significant statistical difference. ($P=0.96$ CI: 95% OR: 1.29 [0.83, 2.00]). The cost of a course of therapy using the biofeedback device in the Ministry of Health supported centrals is currently 8400000 Rls. This is not including overhead costs and depreciation expense, in which case the cost will reach to the number of 25310235 Rls.

Conclusion: No significant difference was seen between adding or not-adding biofeedback to PFMT. In total, non-surgical treatments have appropriate effectiveness and cost-effectiveness. Although, due to the regulatory effect of biofeedback on training it can be mentioned that performing PFMT with observation and also using PFMT along with bio feedback can be considered as an effective intervention in contrast to using PFMT without any observation. This conclusion is obtained with regard to the therapeutic effects and the economic analysis.