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Report of patient's skin conditions after Extracorporeal Shockwave Lithotripsy (ESWL)

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Introduction

Extracorporeal Shockwave Lithotripsy (ESWL) is an efficient and safe method of treating small renal and ureteric calculi. Since the replacement of new ESWL machine (Dornier Gemini lithotripter) in February 2016, treatment outcomes improved and complications such as renal haematoma decreased, however, different skin injuries identified.

Objectives

(1) to assess the impact of ESWL on skin conditions of targeted area; (2) to record different skin conditions and classify them into different categories

Methodology

All patients treated with ESWL for renal calculi at a single centre between 27 June 2016 and 5 August 2016 were reviewed. All patients underwent ESWL were performed as an outpatient procedure with the same preparation and setting. After localization of stone, energy level given according to standard regime starting from level A to level 4, total 3000 shocks were delivered at a rate of 70 shocks per minutes, maximum cumulative energy delivered not more than 2 Joule per kilogram of patient's body weight. The machine operated by a group of trained radiographer and under the supervision of urologist. Once ESWL treatment finished, the skin condition of treatment area was assessed and recorded.

Result

There were 55 patients with ESWL done for renal calculi during the six-week period. 4 (7.2%) patients were excluded from the analysis due to intolerant treatment of ESWL. There were 35 (63.6%) males and 16 (31.4%) females. There were 30 (58.2%)

patients with ESWL for left renal calculi and 21 (41.8%) patients with ESWL for right renal calculi. All skin conditions assessed and recorded, skin conditions could be classified into four groups as following: (1) no skin color changes; (2) erythema: redness of skin; (3) petechiae: bleeding into the skin occur from broken vessels that form tiny red dots; (4) skin abrasion with bleeding. As a result, there were 8 patients (15.7%) with no skin changes; 7 patients (13.7%) with erythema; 33 patients (64.7%) with petechiae; 3 patients (5.8%) with skin abrasion and bleeding. Patient had different degree of skin injuries after ESWL are not uncommon. In order to prevent skin injury after ESWL, a randomized controlled trial study on using skin protection to targeted area before ESWL will be carried out in the near future.