

**PP16****The results of the biochemical analysis of urinary tract stones in a tertiary medical center in Turkey**F. Ateş¹, Ö. Özcan², E. Malkoç¹, F. Dursun¹, B. Bahar², Ö. Yılmaz¹, K. Karademir¹¹ Department of Urology, GATA Haydarpaşa Training Hospital, Istanbul, Turkey² Department of Biochemistry, GATA Haydarpaşa Training Hospital, Istanbul, Turkey

Objective: There is no clear information available about the incidence of urinary tract stones according to their types in our country. This study was conducted to gather information about mineral contents of commonly seen stones which were operated and analyzed in our hospital.

Materials and Methods: Urinary tract stones (n=94) removed in our clinic over the last year by URS, PNL or by open method were analyzed qualitatively by chemical methods. According to their mineral content stones were screened for presence of calcium, oxalate, phosphate, uric acid, cystine, magnesium, ammonium and carbonate.

Results: Calcium, oxalate, phosphate, ammonium, uric acid, cysteine, carbonate, magnesium minerals were found in 79 (84%), 74 (78.7%), 39 (41.5%), 13 (13.8%), 9 (9.6%), 3 (3.2%), 1 (1.1%), 4 (4.2%) cases, respectively. The stones were Ca-Ox (43), Ca-Ox-P (22), pure phosphates (7), Mg-ammonium-P (4), Ca-Ox-P-uric acid (4) and Ca-Ox-ammonium (4). Nine stones were pure (7 phosphate, 1 ammonium, 1 uric acid). Two, three and four-mineral containing stone numbers were 48, 32 and 5, respectively. Uric acid stones were Ca-Ox-P-uric acid (4), Ca-uric acid and cysteine, Ca-ammonium-uric acid, ammonium and uric acid (1) mixture. None of cysteine stones (3) was pure cysteine, in all three cysteine stones, calcium and in one uric acid was present. Mixed ammonium (12) stones were Ca-Ox-ammonium (4), Ca-Ammonium-uric acid (1), Mg-ammonium phosphate (4), ammonium carbonate (1), ammonium-uric acid (1), and Ca-Ox-ammonium-phosphate (1). Two-mineral stones were CA-Ox (43), CA-cysteine (2), ammonium carbonate (1), ammonium uric acid (1) and Ca-phosphate (1); 3-mineral stones were Ca-Ox-P (22), Ca-ammonium-uric acid (1), Ca-ammonium-oxalate (4), Mg-ammonium-phosphate (4), Ca-uric acid-cystine (1); 4-mineral stones were Ca-Ox-P-uric acid (4), and Ca-Ox-P-ammonium (1).

Conclusion: Although the most common stones were calcium oxalate and calcium-oxalate-phosphate stones, most of the stones were containing extra-minerals. The compositions of urinary stones should be take into consideration.