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One hundred stool samples and fifty urine samples were obtained from volunteers between 20 - 60 years old of both sex during October to December in 2014 . Out of 100 stool samples , Fifty were from patients with urinary stone disease from the Urological Lithotripsy Unit / Al Basrah General Hospital in Al Basrah province and fifty stool samples were from healthy individuals as a control , and the other fifty midstream urine samples were collected from the same patients with urolithiasis .

The bacterial growth appeared in 48 (96%) of urine samples . Out of 55 bacterial isolates , Gram – positive was (71%) while the other was Gram - negative bacteria . However , by *16SrDNA* gene sequencing ,18 different species were identified as 10 (22.72%) *Staphylococcus haemolyticus* , 7 (15.9%) *Escherechia coli* , 5 (11.4 %) *Staphylococcus epidermidis* and 3 (6.8%) *Enterococcus faecalis* , whereas *Pseudomonas aeruginosa* , *Klebsiella pneumonia* , *Streptococcus agalactiae* , *Staphylococcus hominis* and *Bacillus cereus* were 2 (4.54%) for each . Moreover, *Bacillus subtilis* , *Enterococcus raffinosus*, *Staphylococcus lugdunensis* , *Staphylococcus warneri*, *Streptococcus parasanguinis*, *Corynebacterium amycolatum*, *Corynebacterium aurimucosum*, *Corynebacterium coyleae* and *Corynebacterium tuberculostearicum* were 1(2.27%) for each . Four isolates (No. 9 , 33 , 41 and 46) were recorded as new global strains and published by National Center for Biotechnology Information (NCBI) in European Nucleotide Archive (ENA) and the GenBank as *Escherichia coli* strain IRQBAS14, *Corynebacterium tuberculostearicum* strain IRQBAS15 , *Corynebacterium coyleae* strain

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IRQBAS16 and *Corynebacterium aurimucosum* strain IRQBAS17, respectively.

The bacterial species were more frequent in patients without surgical operation (88.6%), antibiotic use (77.3%), kidney stone and Ca - oxalate type (72.7%, for each) .

Bacterial isolates had a high rate of sensitivity to imipenem (86.4%) , while a high rate of resistance was against ampiclox and methicillin (100% , for each) . However, high rate of multi - drug resistance was observed among all isolates.

The urolithiasis was more in males (60%) . Anatomical location of stone was 74 % in kidney followed by ureter (24%) and bladder (2%). In addition , the majority of patients with urinary stone used antibiotics (74%) , diuretics (70 %) . The size of stone 7-13 mm was the predominant (72 %) .

Specific gene – PCR for *Oxalobacter formigenes* were detected in 48 (96 %) of healthy volunteers stool samples comparing with only 18 (36 %) urolithiasis patients stool samples. Among the types of urinary stones, calcium- oxalate was 37 (74%) more than non- oxalate stones and only 9 (24.3%) of samples with calcium- oxalate stones were positive for *Oxalobacter formigenes* ,while 9(69 .2 %) from 13 stool samples with non- calcium stones were positive versus 4(30.8%) negative . The results showed the positive role of *Oxalobacter formigenes* to reduce the calcium - oxalate stones .

The bacterial species were more frequent (75%) in oxalate stone patients with the negative of *O. formigenes* , especially , *S. haemolyticus* and *S. epidermidis* (100%, for each) . These results reveal the absence

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of *O. formigenes* from the intestinal microflora may indirectly increase the ability of some bacterial species to colonize and invade the urinary tract .