REFERENCES AND RECOMMENDED READINGS
(*of special interest, **of outstanding interest)


Summary.- OBJECTIVE: To report a complication of a staghorn stone in a non-functioning right kidney.

METHODS: We present a 47 year old female with right lumbar pain and history of recurrent urinary tract infection (UTI). After an acute pyelonephritis episode, a right staghorn stone was diagnosed in a non-functioning right kidney.
**Objetivo:** Presentamos complicación de una litiasis coraliforme en riñón no funcionante.

**Métodos:** Paciente femenina de 47 años con dolor lumbar derecho e infecciones urinarias a repetición. Luego de una pielonefritis aguda, se diagnostica una litiasis coraliforme en un riñón no funcionante.

**Resultados:** Durante la nefrectomía derecha se comprueba una fistula reno-colónica no informada en los estudios de imágenes previos a la cirugía. Luego de la resección de la misma, se realiza un cierre simple de la pared colónica involucrada.

**Conclusiones:** La fistula reno-colónica es una complicación poco frecuente de una pielonefritis aguda secundaria a litiasis coraliforme.

**Resumen.-** OBJETIVO: Presentamos complicación de una litiasis coraliforme en riñón no funcionante.

MÉTODOS: Paciente femenina de 47 años con dolor lumbar derecho e infecciones urinarias a repetición. Luego de una pielonefritis aguda, se diagnostica una litiasis coraliforme en un riñón no funcionante.

RESULTADO: Durante la nefrectomía derecha se comprueba una fistula reno-colónica no informada en los estudios de imágenes previos a la cirugía. Luego de la resección de la misma, se realiza un cierre simple de la pared colónica involucrada.

CONCLUSIONES: La fistula reno-colónica es una complicación poco frecuente de una pielonefritis aguda secundaria a litiasis coraliforme.

**Palabras clave:** Fistula reno-colónica. Pielonefritis crónica. Litiasis coraliforme.

**Introducción**

Renocolic fistula is a rare entity. The reported cases of this kind of fistula are in association with xantogranulomatous pyelonephritis (1, 2, and 3). The clinical characteristic of this entity included: calculi or obstruction of the urinary tract, history of UTI, anemia, liver dysfunction, psoas abscess, nephrocutaneous fistula, renocolonic fistula or paranephric abscess (1). Although there is no patognomonic characteristic described for image studies, the CT provides in most cases a correct diagnosis previous to surgery. We report a case of renocolonic fistula in a patient with staghorn calculi in a non-functioning kidney.

**Case Report**

A 46 year-old female was referred from primary care with a one-month persistent right lumbar pain. She also complained of a UTIs history and an acute pyelonephritis episode last month. The only image she brought was an abdominal X-ray showing a right staghorn stone. We performed an ultrasonography, showing a big right kidney with a shrinking of the cortex-medulla relation, containing a staghorn stone. The intravenous urography showed a non-functioning right kidney with staghorn calculi.

The CT-scan confirmed the diagnosis. The isotopic renography confirmed the absence of renal function. With the suspicion of a xantogranulomatous pyelonephritis a right nephrectomy was done. Operative finding of a renocolonic fistula was revealed (Figure 1) and we performed a single closure of the compromised colonic wall with resection of the fistulous tract. The patient was discharged in a stable condition 10 days later. The pathologist informed an obstructive chronic pyelonephritis with renal atrophy (Figure 2); on the inferior pole of...
the kidney and, in the adherent corresponding colonic wall, granulomatous reaction with giant cells compatible with a fistulous tract (Figure 3).

**DISCUSSION**

Xanthogranulomatous pyelonephritis is an infrequent entity that occurs in the presence of chronic obstruction and suppuration. Most of the patients suffered from fever with flank or abdominal pain, weight loss, lower urinary tract symptoms, gross hematuria, anemia, abdominal mass or piuria. Associated pathological findings such psoas abscess, nephrecolonic fistula, renocolonic fistula and paranephric abscess were found in 33.3% of the cases (1). Histological examination is characterized by the presence of foamy lipid-containing macrophages; diffuse infiltration with plasma cells and histiocytes (4). In most of the cases the fistula diagnosis is made previous to the surgery. On the other side, chronic pyelonephritis with renal atrophy due to a chronic obstruction does not have specific symptoms and presents as hypertension or end-stage renal disease. At first, patients refer symptoms associated to the obstruction, but at endstage mostly remain asymptomatic. Histological examination shows a focal or extensive chronic inflammation with interstitial fibrosis and tubules which are atrophic, dilated or hypertrophic. Dilated tubules may be filled with eosinophilic colloidal material, producing a pattern resembling thyroid tissue (“thyroidization” of the kidney). Glomeruli may be normal or replaced by scar tissue.

**CONCLUSION**

Renocolonic fistula is a common complication of xanthogranulomatous pyelonephritis and in most cases a CT confirms the diagnosis. In our case, the histological findings are typical for a chronic pyelonephritis, a disease that is not associated, in our knowledge, to this type of complication. The CT didn’t show the fistula, which was found during the surgery. In view of the findings and the evolution of the patient, we believe that our patient suffered from an acute pyelonephritis and/or pyonephrosis in a non-functioning kidney, which resolved spontaneously after the drainage into the colon through the fistula.

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