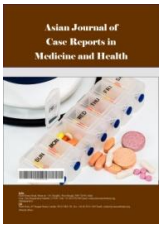

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Sewing Needle in the Kidney after Being Ingested 13 Years Before

Benatta Mahmoud [a*]

[a] *Oran 1 Ahmed Ben Bella, CHU Oran, Algeria.*

Author's contribution

The sole author designed, analysed, interpreted and prepared the manuscript.

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Case Study

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ABSTRACT

Foreign body ingestion occurs, especially in childhood. But we saw it among adults. most foreign bodies pass through the gastrointestinal tract, causing no damage. Migration of an ingested needle to the kidney is very rare. We report a case of a 30-year-old female who was admitted to the urology department for right lumbar pain which appeared three months later. The interrogation found a notion of accidental ingestion of a sewing needle 13 years ago. On physical examination, there was lumbar pain caused by the shock. Radiography of the abdomen showed a needle in the right hypochondrium.

Computed tomography (CT) was performed. CT showed a linear density in the right kidney, lower pole. At follow-up, stabbing pain in the right upper abdominal quadrant was noted. Surgical exploration was planned; We then performed surgical removal; we easily removed the needle in this fashion. The postoperative period was uneventful, and the patient was discharged on the second day following the operation.

The presence of an ingested foreign body in the renal parenchyma remains exceptional. It follows negligence or inability to remove the foreign body immediately after its ingestion. The clinical symptomatology is not specific, it can range from abdominal pain to infection and up to renal failure. It is the conventional imagery or even the uro-tomo-densitometry which localizes the exact seat of the foreign body, its relationship with the urinary excretory tract, and the consequences of its presence. The extraction strategy depends on imaging or and endoscopic data, and the means and skill of the surgical teams. Minimally invasive surgery is desirable when it is workable;

**Corresponding author: E-mail: benatta.mahmoud@gmail.com;*

otherwise open surgery is still the order of the day. The importance of preventing this type of accident in children and adults is indisputable. In case of an occurrence, urgent medical care is necessary before reaching the stage of complications.

Keywords: Kidney; foreign body; sewing needle.

1. INTRODUCTION

Foreign body ingestion occurs, especially in childhood. But we have also seen it among adults. The most foreign bodies pass through the gastrointestinal tract, causing no damage [1]. Migration of an ingested needle to the kidney is very rare. We report a case of ingestion of a sewing needle that was removed successfully by surgery.

2. CASE REPORT

We admitted a 30-year-old female to the department for right lumbar pain, which appeared three months later. The interrogation found a notion of accidental ingestion of a sewing needle 13 years ago. On physical examination, we noted lumbar pain caused by the lumbar shock. Radiography of the abdomen showed a needle in the right hypochondria (Fig. 1).

Because there have been no hospital or legal reports regarding the ingestion of the needle.

We based our observation on oral reports from parents and the patient.

We performed Computed tomography (CT). CT showed a linear density in the right kidney lower pole (Fig. 2 and Fig. 3). We planned surgical exploration; we performed surgical removal of the needle through open left lumbotomy (Fig. 4). The postoperative period was uneventful, and we discharged the patient on the second day following the operation.

Fig. 1. Radiography of Abdomen: linear opacity in right renal era

Figs. 2 and 3. CT scan revealed linear density in the right kidney lower pole

Fig. 4. Sewing needle after retrieval

3. DISCUSSION

The presence of a foreign body, accidentally ingested in the digestive tract, in the renal parenchyma is an exceptional situation [1].

To the best of our knowledge, less than 15 cases have been described in English literature until 2020 [2].

The first case in a child was reported in 1933. In 1955 Macaulay reported a case discovered in adulthood [1]. The same article reports the existence of 4 previous cases discovered in childhood.

Diagnostic delay after ingestion varies from 1 day to several years, it depends on the moment of declaration of the ingestion by the child or the parents or even the state of consciousness in which the patient is at the time of accidental ingestion. About half of all patients who have ingested a foreign body do not know they have swallowed the object at the time of consumption [3].

To our knowledge, the longest duration of stay of the ingested renal foreign body is 13 years, which we report in our case.

Within the first hours of ingestion, the foreign body may be found in the digestive tract and removed endoscopically.

Different foreign bodies have been described: pins or hairpins, sewing needle-fish-edge, toothpick, brush bristle, bullets, and silicon products. Most of them are long, stiff, and sharp objects with high perforation and migration risks [2,4].

In most cases there is a single foreign body, multiple foreign bodies have been described.

The event that caused the introduction of the accidental foreign body during childhood can be forgotten or neglected, and it is only after careful questioning of the family and the patient that this type of aetiology can be revealed [2].

The dimensions of foreign migrant bodies to the urinary tract range from 4 to 5 cm.

The foreign body can reach the kidney parenchyma through the skin, through the urinary tract, through the digestive tract or after an iatrogenic procedure, and among them acupuncture, especially in Japanese literature [5].

Symptoms vary from pain, renal colic, hematuria, fever, pyuria.

After swallowing a foreign body, it is the right kidney that is reached in most cases; the migration path most often described is duodeno-renal. The relative rigidity of the duodenum can explain this, with the mesenteric vessels in the front and the aorta in the back [2].

Sometimes the ureter can be crossed by the foreign body coming from the digestive tract and hydronephrosis [6].

Alireza Farshi reported the most recent case in 2020, it was a man 34 years old, with 6-mm calculus and a 5-cm needle in the middle and upper pole of the left kidney, with previous history of left varicocelectomy 12 years ago [7].

As the excretory pathway and renal parenchyma, the renal pedicle may be the site of the migration of foreign bodies from the digestive tract. Iwai and coll [5] reported the case of a 75-year-old patient who ingested a fishbone that migrated into the right renal vein and caused thrombosis that led to nephrectomy.

We can discover such a foreign body at the complications stage: significant hematuria, pyonephrosis, lithiasis, vascular thrombosis, pyonephrosis, and renal failure.

Treatment comprises eviction of the foreign body from the urinary tract with or without opening of the duodenum if migration is incomplete.

We may state nephrectomy in certain situations, such as pyonephrosis.

The pathways depend on the place of migration, means, and skills: open surgery by lumbotomy or subcostal incision [8].

Laparoscopy, and endo-urology if the foreign body is inside the collecting system [3,5,6].

4. CONCLUSION

The presence of an ingested foreign body in the renal parenchyma remains exceptional. It follows negligence or inability to remove the foreign body immediately after its ingestion. The clinical symptomatology is not specific, it can range from abdominal pain to infection and up to renal failure. It is the conventional imagery or even the uro-tomo-densitometry which localizes the exact seat of the foreign body, its relationship with the urinary excretory tract, and the consequences of its presence. The extraction strategy depends on imaging data or even endoscopic exploration, and the means and skill of the surgical teams. Minimally invasive surgery is desirable when it is workable; otherwise, open surgery is still the order of the day. The importance of preventing this type of accident in children and adults is indisputable. In case of an occurrence, urgent medical care is necessary before reaching the stage of complications.

CONSENT

As per international standard or university standard, patients consent has been collected and preserved by the authors.

ETHICAL APPROVAL

As per international standard or university standard written ethical approval has been collected and preserved by the author(s).

COMPETING INTERESTS

Author has declared that no competing interests exist.

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