

KALÇADAN TORAKSA VE PELVİSE İKİ STEINMANN ÇİVİSİNİN GÖÇÜ

MIGRATION OF TWO STEINMANN PINS FROM THE HIP TO THORAX AND THE PELVIC ABDOMEN

Dr. Levent ÇANAKKALELIOĞLU*, Dr. Hedef ÖZGÜN**, Dr. Abdülkadir AKBAŞ***

Özet:

Ortopedik cerrahide, çiviler ve tellerin göçü ile seyreden olgulara ait yayınlar sıklıkla. Yakın izlem ve erken tanı, bu komplikasyonun mortalite ve morbiditesini azaltabilmektedir. Femoral boyun kırığının tedavisi sonrası gelişen kalça protezinin enfeksiyöz komplikasyonunun tedavisinde kullanılan iki Steinmann çivisinden birinin toraksa ve diğerinin de pelvise göç ettiği bir olguyu sunuyoruz.

Anahtar kelimeler: göç, çivi, toraks, kalça, femoral boyun kırığı.

INTRODUCTION

The human body is dynamic and subject to migration of inserted foreign bodies. There are many cases reported in the literature regarding foreign body migration. Among these foreign bodies, pins and wires, frequently used in the management of fractures and dislocations, were reported to migrate and cause serious complications. Herein we report a rare case with two pins which migrated from the left hip joint, one to right hemithorax and the other to pelvic abdomen.

CASE REPORT

A 69-year-old woman with left hip pain was admitted to orthopedics clinic. She had suffered of a cerebrovascular attack causing right hemiplegia and dysphasia about seven years ago. She had also symptoms of cardiac insufficiency and chronic obstructive pulmonary disease on admission. She underwent total left hip replacement because of femoral neck fracture in a local hospital four months ago. In the early postoperative period, the prosthesis was dislocated and infected. The reduction of the hip was not successful and the infection could not be eradicated by antibiotherapy. Then the orthopedist removed the hip prosthesis during a second operation and placed two Steinmann pins through great trochanter to acetabulum. Following this second operation, she was unable to walk and complained of left hip pain.

The patient was admitted to our hospital with ongoing problems about her hip and being bedridden. To manage these unresolved hip problems, an operation for hip prosthesis placement was planned. During preoperative preparation, control pelvic radiographs revealed an

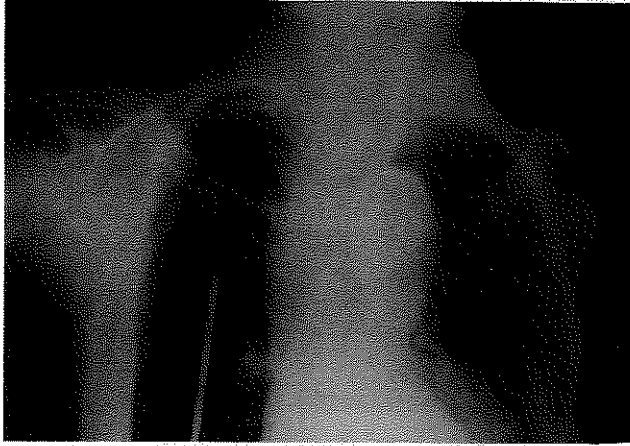
unusual foreign body, a Steinmann pin in the pelvic abdomen (Fig. 1). Repeated radiographs of different angles confirmed initial diagnosis and furthermore, chest radiograph revealed another pin in right hemithorax (Fig. 2-A and 2-B). Thoracoabdominal computerized tomography scan also showed the Steinmann pins in the same locations (Fig. 3-A and 3-B).

An operation was performed to clear out the bone fragments around and into the left acetabulum. An acetabular cup and femoral stem were inserted, and the hip was reduced. The patient had an attack of hypotension during the operation, so the removal of Steinmann pins were cancelled according to the suggestion of anesthesiologist. Control postoperative left hip radiograph showed the prosthesis in the right location (Fig. 4).

Figure 1. A pelvic radiograph taken before the operation.



Figure 2-A: Plain and lateral thoracic radiographs revealing other pin in the right hemithorax.



After the recovery period, she had a laparotomy with a right paramedian incision to remove the pins. Adhesions between omentum, intestines, and parietal peritoneum were separated with sharp dissection. A Steinmann pin was found free in the abdominal cavity, with no destruction in any intraabdominal organ. Following mobilization of the liver, the right diaphragmatic crus was opened. The other pin, lying free in the right hemithorax, was extracted (Fig. 5). Postoperative thorax radiograph showed no sequela concerning the pin.

In the postoperative period, she had severe dyspnea and respiratory distress with low partial oxygen saturation. Since cardiac and pulmonary insufficiency symptoms were exacerbated, she was transferred for further intensive care unit support to a reference hospital according to her social security. The result was unfortunately fatal due to pulmonary thromboembolism.

Figure 3-A. Thoracic and pelvic compu-terized tomography scans showing the pins (in thorax white arrow, in pelvis black arrow).

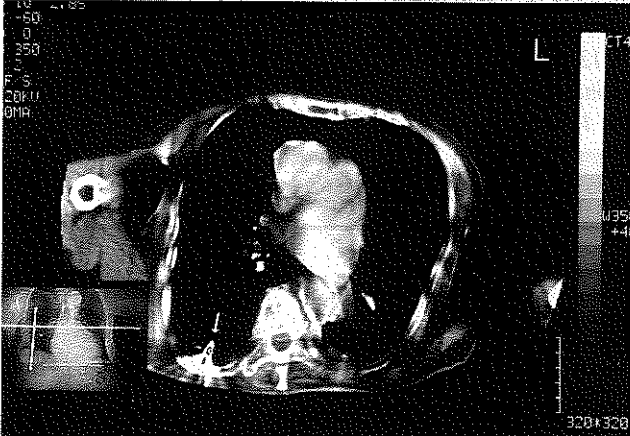
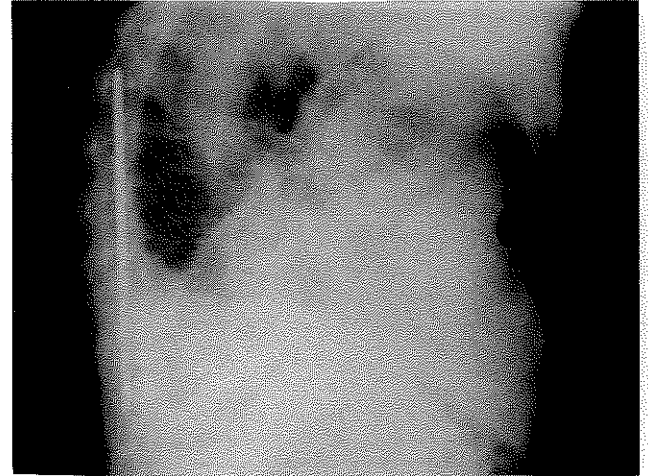


Figure 2-B: Plain and lateral thoracic radiographs revealing other pin in the right hemithorax.



CONCLUSION

There are many reports about the migration of pins to different anatomical sites (1). A pin migrating from the shoulder through the thoracic cavity to the abdomen is documented in two reports, one to the retroperitoneal space (2), and the other one to the spleen in the same direction with the gravitational force (3). As for the opposite direction from the force of gravity, several pins have been reported to migrate from the hip to the pelvic abdomen (4,5,6). Intrapelvic migration after internal fixation of a hip fracture has been found to result in perforation of the bladder (7), rectum (8), and common femoral arteries (9). Migration from hip to the lung or thorax is rare. Lawson and Bender reported the passage of a Kirschner wire from right hip to the left lung (10). In our case, it is a subject of curiosity how that pin passed through the abdomen into the thoracic cavity. Bedridden life of the patient may have made this migration easier.

Figure 3-B. Thoracic and pelvic compu-terized tomography scans showing the pins (in thorax white arrow, in pelvis black arrow).

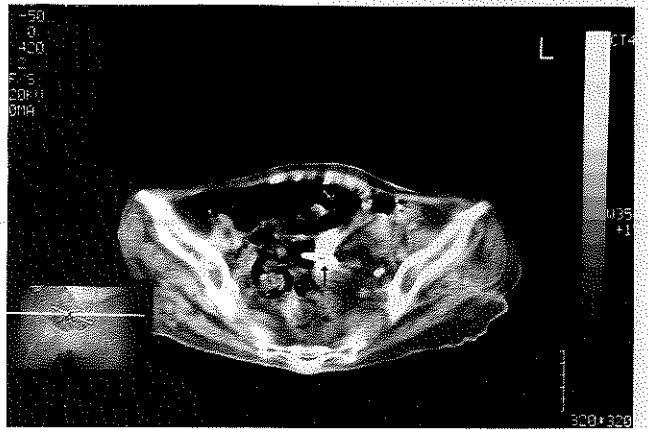
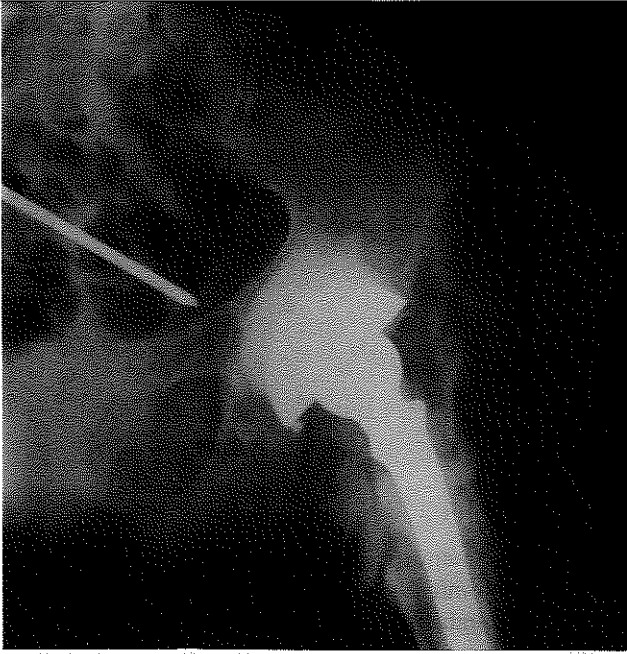


Figure 4. Postoperative left hip radio-graph demonstrating the prosthesis.



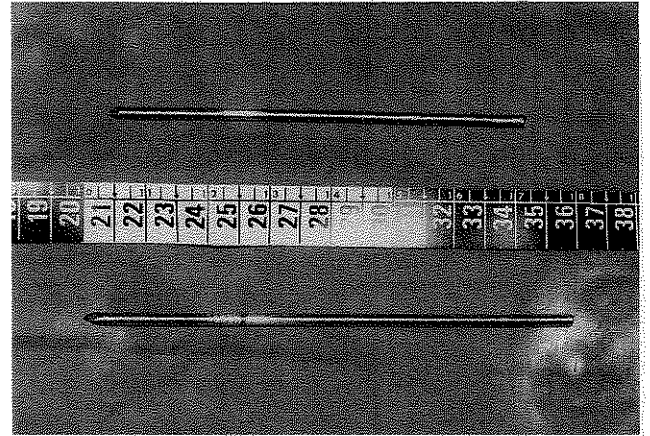
As in our case, a pin migration to the lung may not reveal any symptoms (11,12) and migration of a pin to the lung does not necessarily cause pneumothorax (3,13).

We do not want to discuss whether the Steinmann pins were used with a correct indication or not. Our aim is to emphasize the importance of being conscious about the possible migration of these pins. Before placing the pins, the orthopedist must inform the patient to return for follow-up evaluation and pin removal. Intraoperative and postoperative radiographs should be taken to document the placement of the pins. Radiographs should be obtained at routine intervals to demonstrate any evidence of early migration of the pins. Patients must be followed clinically and radiographically until the end of therapy, the removal of the pins. Pins and screws are torpedoes left free in bones which can damage any organ in any time, so must be under close follow-up.

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Figure 5. The Steinmann pins after extraction.



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Aydın SSK Hospital, General Surgery Clinic*
Adnan Menderes University, Department of General Surgery**
Aydın SSK Hospital, Orthopedics Clinic***
Yazışma adresi : Dr. Hedef Özgün
Adnan Menderes Üniversitesi Tıp Fakültesi
Genel Cerrahi AD, 09100- AYDIN
e-mail: hedefozgun@yahoo.com