

Pelvic Chondrosarcoma with Bladder Involvement

Mesane Tutulumlu Pelvik Kondrosarkom

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ABSTRACT Chondrosarcoma is the second most common malignant tumor of bone. The treatment of chondrosarcoma is surgical resection. Most of the time, they are not sensitive to chemotherapy and radiotherapy. Pelvic sarcomas have a worse prognosis than those in long bones. Treatment of pelvic chondrosarcoma is challenging because of the tumor's proximity to major vessels and organs. We present the case of a 43-year-old man with advanced pelvic chondrosarcoma filling the entire pelvis and invading the bladder who was treated with hemipelvectomy, radical cystoprostatectomy and ileal loop urinary diversion. In such well chosen, non-metastatic, young chondrosarcoma patients, multidisciplinary surgical approaches can provide survival benefits.

ÖZET Kondrosarkomlar, kemiğin ikinci en sık görülen malign tümörleridir. Kondrosarkomların tedavisi cerrahi rezeksiyondur. Çoğu zaman, kemoterapi ve radyoterapiye duyarlı değildirler. Pelvik sarkomların prognozu, uzun kemiklerdekilere göre daha kötüdür. Pelvik kondrosarkomların tedavisi, tümörlerin ana damarlara ve komşu organlara yakınlığı nedeniyle zordur. Biz de tüm pelvisi dolduran ve mesaneyi invaze eden, ilerlemiş pelvik kondrosarkom nedeniyle hemipelvektomi, radikal sistoprostektomi ve ileal loop üriner diversiyon yapılan 43 yaşındaki bir vakamızı sunuyoruz. Bu durumda iyi seçilmiş, metastatik olmayan, genç hastalarda multidisipliner cerrahi yaklaşımlar sağkalım faydaları sağlayabilir.

Keywords: Chondrosarcoma; cystectomy; prostatectomy; urinary diversion

Anahtar Kelimeler: Kondrosarkom; sistektomi; prostatektomi; üriner diversiyon

Chondrosarcoma is the second most common malignant tumor of bone.¹ Generally chondrosarcomas are treated with surgical resection.² They are not sensitive to chemotherapy or radiation.³ Pelvic sarcomas have a worse prognosis than those in long bones.⁴ Areas where adjacent organ and major vascular involvement can frequently occur, such as the pelvic region, the standard treatment becomes challenging.

CASE REPORT

A 43-year-old male patient was referred to İstanbul Metin Sabancı Baltalimanı Bone Disease Training and Research Hospital for giant pelvic chondrosarcoma. As orthopedic oncologists evaluating radiological imaging of the patient, they found that nearly

all bladder wall was involved with the tumor. A consultation was requested from our hospital for the evaluation of the patient since there was no urologist in their hospital.

The patient had a palpable mass in pubic region and had voiding difficulty. In blood examination, creatinine, white blood cells and haemoglobin levels were normal. While the urine culture was clean, there was hematuria and pyuria in the dipstick. Pubic ramus tru-cut biopsy result was reported as grade 2 chondrosarcoma.

Computed tomography scan of the abdomen showed total bladder dislocation due to giant pelvic chondrosarcoma originating from left ischiopubic ramus and occupying the entire pelvis (Figure 1).

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Grade 2 left and Grade 1 right hydronephrosis were seen. No visceral metastases were detected.

Magnetic resonance imaging of the bone pelvis showed a mass lesion with a total size of 137x93x95 mm on the anterior of the bladder containing ossified areas in its internal structure, giving the impression that it was partially connected with the left superior pubic arm. The lesion, which showed T2 distinct hyperintense character, had created significant compression on the bladder. It was entirely compressed to the posterior part of the right pelvis (Figure 2). There was also significant pressure on the prostate gland and the left seminal vesicle.

Written informed consent for radical cystoprostatectomy + ileal loop urinary diversion was obtained from the patient in addition to orthopedic resection consents.

The surgery was performed under general anesthesia, in a supine position with left leg left open (Figure 3). A left ilioinguinal incision was made and then combined with a sub-umbilical median incision.

Approximately 3/4 of the bladder wall was invaded by the mass. Bladder was completely absorbed into the mass. The mass was tried to be dissected from the bladder serosa. This was not possible (Figure 4). Preserving the ureters, left Type 3 hemipelvectomy was performed according to Enneking and Dunham pelvic resection classification with a large part of the bladder wall above the mass.⁵ Remaining bladder tissue, prostate and bilateral seminal vesicles were removed (Figure 5).

A 15 cm ileum segment was removed 20 cm proximal to the ileocecal valve. Ileoileal anastomosis



FIGURE 1: Giant pelvic chondrosarcoma originating from left ischiopubic ramus and occupying the entire pelvis.

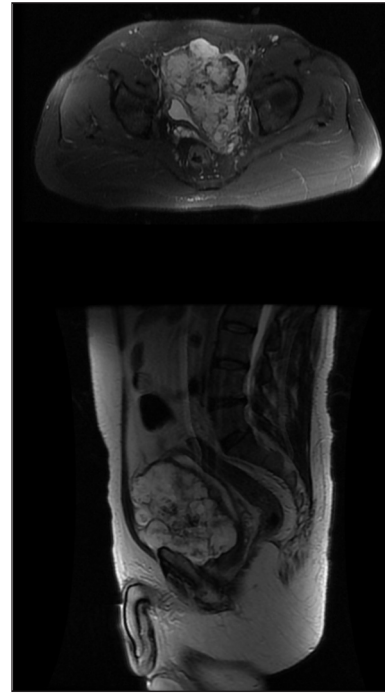


FIGURE 2: Bladder was entirely compressed to the posterior part of the right pelvis.



FIGURE 3: Surgery position of the patient.

was performed by a linear cutter. Ureters were anastomosed to the base of the ileal segment using the Wallace technique.⁶ The neobladder was mouthed in the right lower quadrant in accordance with peristaltism.

As a result of the pathology, the surgical margins were negative and grade 2 chondrosarcoma with a diameter of 10 cm was detected. Chondrosarcoma infiltration was observed in the soft tissue around the

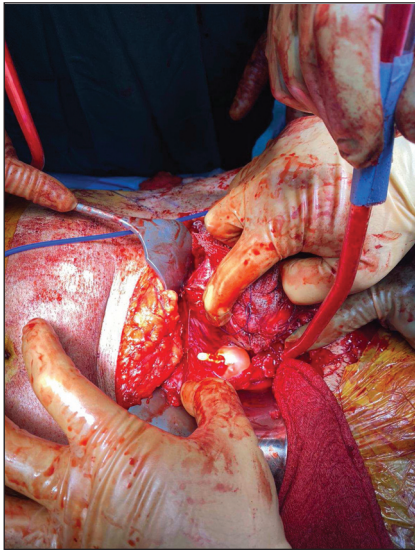


FIGURE 4: Bladder was completely absorbed into the mass.

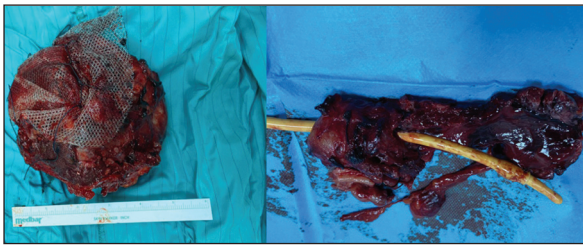


FIGURE 5: Hemipelvectomy and radical cystoprostatectomy specimens.

bladder. According to Gleason score, 3+3=6 adenocarcinoma was detected in %1 prostate tissue. Surgical margins were also reported as negative.

The patient was discharged after a week. After one month, he was able to walk without support and his bilateral ureteral catheters were removed.

No local recurrence or distant metastasis was observed in the 1-year follow-up. Prostate-specific anti-

gen was undetectable and the upper urinary system was normal.

DISCUSSION

Olivieri et al. reported their palliative management to a similar pelvic chondrosarcoma case with urinary obstruction.⁷

As far as we know, this is the first case who underwent hemipelvectomy, radical cystoprostatectomy and ileal loop urinary diversion due to the bladder involvement of iliac bone chondrosarcoma.

Incidental detection of prostate cancer at a young age also increases the importance of the case.

In such well chosen, non-metastatic, young chondrosarcoma patients, multidisciplinary surgical approaches can provide survival benefits.

Source of Finance

During this study, no financial or spiritual support was received neither from any pharmaceutical company that has a direct connection with the research subject, nor from a company that provides or produces medical instruments and materials which may negatively affect the evaluation process of this study.

Conflict of Interest

No conflicts of interest between the authors and / or family members of the scientific and medical committee members or members of the potential conflicts of interest, counseling, expertise, working conditions, share holding and similar situations in any firm.

Authorship Contributions

Idea/Concept: Emre Can Polat; **Design:** Yavuz Arikan; **Control/Supervision:** Emre Can Polat; **Data Collection and/or Processing:** Devrim Özer; **Analysis and/or Interpretation:** Emine Yıldırım; **Literature Review:** Emine Yıldırım; **Writing the Article:** Emre Can Polat.

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