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OSSEOUS COMPLICATIONS FOLLOWING TRANSVAGINAL BONE ANCHOR FIXATION IN FEMALE PELVIC RECONSTRUCTION PROCEDURES: A REVIEW OF THE LITERATURE AND REPORT FROM THE LARGEST SINGLE SERIES

Aims of Study

Proponents of transvaginal bone anchor fixation in female pelvic reconstruction site several advantages including a stable and more anatomic point of fixation, as well as a decrease in morbidity by eliminating abdominal incision and retropubic needle passage. Critics argue the potential for osseous complications outweigh the theoretical advantages. We review the literature and report on the largest single series of transvaginal bone anchors for pelvic reconstruction.

Methods

Primary reported series and case reports of female pelvic reconstructive procedures involving transvaginal bone anchor fixation referenced in Index Medicus from January 1990 to March 2003 were extracted using the MEDLINE database on English language articles. We then reviewed our prospective database of transvaginal bone anchor placement for cadaveric transvaginal sling (CaTS) and cadaveric prolapse repair with sling (CaPS). Prophylactic measures employed in our series include: no bone anchors for patients on chronic steroids, preoperative intravenous antibiotics,
intraoperative antibiotic irrigation, and one week of postoperative oral antibiotics.

Results

Our prospective database includes 450 patients (305 CaPS and 145 CaTS) who have undergone transvaginal placement of bone anchors with mean follow-up of 20 months (range 6-56 months). In our series two patients (0.4%) have developed osteitis pubis (OP) that resolved without sequelae using nonsteroidal anti-inflammatory drugs. No patients in our series have developed osteomyelitis. A review of the literature on transvaginal bone anchors reveals no cases of osteitis pubis or osteomyelitis in 954 patients from 14 series. With the addition of our single largest series, the reported prevalence of osteitis pubis in series of transvaginal bone anchors is 0.1% (2/1404). Although several series have reported osteomyelitis following suprapubic bone anchor placement, to our knowledge there has been only one case report of osteomyelitis following transvaginal bone anchor placement.

Conclusions

Based upon published series, osseous complications following transvaginal bone anchor placement for pelvic reconstruction are uncommon with no cases of osteomyelitis and an osteitis pubis prevalence of 0.1%. Although osteomyelitis has been reported with suprapubic bone anchors, there has been only one case report of osteomyelitis with transvaginal bone anchor placement.