

Is There any Symptom of Trunionosis After Arthroplasty in Osteoarthritis of the Hip?: Mini Review

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Abstract

With the development of materials and components prosthetic hip for the purpose of greater durability, mobility, stability and restore range the length of Member to each in particular, modular designs and different materials and interfaces, but complications appeared long posed a challenge for the differential diagnosis, because the objective is to determine if the corrosion of prosthetic components is associated with pain in the postoperative period of Hip Arthroplasty by pathology degenerative. The aim of this min review is to determine if the corrosion of prosthetic components is associated with pain in the postoperative period of Hip Arthroplasty by degenerative pathology. To our knowledge few publications that investigate the postoperative pain with corrosion but the clinical expression of trunionosis is not defined yet.

Keywords: Trunion; Corrosion; Hip Arthroplasty; Pain

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Introduction

With the development of materials and components prosthetic hip for the purpose of greater durability, mobility, stability and restore range the length of Member to each in particular, modular designs and different materials and interfaces, seated, metal polyethylene or ceramic-metal, allowed greater number of combination for the reconstruction, however, material fatigue, were reported found in the revisions tissue reactions at the junction of the modules, bringing pain, stiffness, difficulty walking, and instability. Risk factors have been described for the Corrosion of modular components, such as BMI greater than 30, neck + 8 mm, greater than 36 mm and high offset. Heads, but remains to be elucidated if corrosion or trunionosis has clinical expression.

Objective

The aim of this mini review is to determine if the corrosion of prosthetic components is associated with pain in the postoperative period of Hip Arthroplasty by degenerative pathology.

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Methods

A systematic search was conducted in Medline, Pubmed and Scielo. 2013-2018 study this lowered in presented work, so it does not require approval of the Committee of bioethics or consent of patients.

Search strategy

There was no language restriction. Are the following keywords Trunion Corrosion; Hip Arthroplasty; using combination of Boolean operators and or or

Inclusion and Exclusion criteria

The studies were considered to be suitable if it met the following criteria and multicentre studies, clinical trials, case-control study. Excluded works of the present meta-analysis, incomplete data, and case report, overview of conferences or review articles.

Criteria for selection

Two reviewers independently reviewed the Abstract from the potential studies, those that potentially meet the criteria, are fully checked, and in case of discordance is consulted to a third reviewer.

Results

A total of 79 articles 34 of them were dismissed for failing to comply with the inclusion criteria, being 44 the number of revised Abstract. The most common symptoms are pain front of thigh, groin or buttocks, at 2 or 4 years postoperative [1]. Mikkelsen., *et al.* They carried out a comparative study in three non-modular and modular necks, with a total of 63 patients 30 of them, non-modular, mean serum levels of metals and pain, it concludes that non-modular component experienced more pain but serum levels of metal were highest in the modular cases [2]. Hussey., *et al.* publish case-control, cross-sectional with 9 years of follow-up, with a total of 1352 cases, through posterolateral approach, where I use stems from Platinum, femoral head with alloy Corm/cobalt, polyethylene high Cross linked. Only 43 (3.2%) had symptoms of pain in groin, hip or thigh.

Discussion

Corrosion diagnostic parameters are not defined, but serial x-rays could be a parameter, however its sensitivity and positive predictive value is unknown still [3]. Hothi., *et al.* In a series with 94 cases reported that the trunionosis metal on polyethylene does not have clinical symptoms, with a rate of loss of less than 1 mm year surface [4]. The same author in another series of 395 patients with metal-metal prosthesis compared levels of serum levels of metal corrosion, 124 of them had severe corrosion (31%) but unlike Berstock, found no relationship between size of head and trunionosis, but if the Association CIncreased 1.86 or/Cr [5]. The findings of this analysis should be interpreted with certain limitations, one of them is the small number of works which relate clinical and trunionosis.

Conclusion

To our knowledge few publications that investigate the postoperative pain with corrosion and wear of implant prosthetic, however, most of them revolve around the diagnosis of trunionosis, in the Arthroplasty with metal-metal Co/Cr dosage It is mostly analyzed while that in the prostheses metal-polietileno MRI with subtraction of metal takes place, these two methods may contribute to the diagnosis early, but the clinical expression of trunionosis is not defined yet.

References

1. Valle CJ Della., *et al.* "Diagnosis Taper Corrosion: When Is It the Taper and When Is It Something Else?" *The Journal of Arthroplasty* (2018): 1–4.
2. Mikkelsen RT., *et al.* "Modular Neck vs Nonmodular Femoral Stems in Total Hip Arthroplasty-Clinical Outcome, Metal Ion Levels, and Radiologic Findings". *The Journal of Arthroplasty* 32.9 (2017): 2774–2778.
3. Berstock JR., *et al.* "Trunion corrosion: What surgeons need to know in 2018". *The Bone & Joint Journal* 100B.1 (2018): 44–49.

4. Hothi HS., *et al.* "Clinically insignificant trunnionosis in large-diameter metal-on-polyethylene total hip Arthroplasty". *Bone & Joint Research* 6.1 (2017): 52–56.
5. Hothi HS., *et al.* "The Relationship Between Cobalt/Chromium Ratios and the High Prevalence of Head-Stem Junction Corrosion in Metal-on-Metal Total Hip Arthroplasty". *The Journal of Arthroplasty* 31.5 (2016): 1123–1127.

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