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Case Report

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Foreign Body Reaction to a Glass Splinter – A Case Report

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Abstract

We present a case of foreign body reaction to a glass splinter. This case depicts in the attached figures the typical foreign body reaction surrounding a non-organic foreign body. Meticulous dissection of the foreign body and the reactive tissue surrounding it are key to a swift and uneventful recovery.

Keywords: total hip arthroplasty, THA, dialysis, chronic kidney disease, complications.

INTRODUCTION

The reaction to a foreign body is comprised of a set of stages. The initial insult, the entrance of the foreign body, is associated with tissue disruption and bleeding. This activates inflammation and processes [1-3]. Without a foreign body, the tissue response will continue to repair and remodeling. The presence of a foreign body compels a continued inflammatory response. It is primarily with macrophages or foreign body giant cells, while the outer layer is laid down by fibroblasts, to form an outer capsule [1,4,5].

CASE REPORT

In the case we present a 29-year-old healthy female, who works as a cleaning supervisor at a factory. She felt an initial insult and suspected that a glass splinter entered the volar skin of her third right digit. She rinsed her hand thoroughly and tried to extract the foreign body herself. The splinter was initially buried in the tissue, and she was not able to extract it. She was not sure if she succeeded in the extraction and hence left it to heal. She sought medical attention after few weeks due to minor discomfort.

An ultrasound examination revealed a foreign body in the subcutaneous tissue of her third right digit. The extraction was performed under local anesthesia in the operating room. The foreign body was dissected with its surrounding tissue as can be seen in figure 1. The foreign body after dissection from the surrounding tissue is seen in figure 2.

In follow up examination the incision over the foreign body and its reaction healed uneventfully and the patient returned to work two weeks after her surgery.

DISCUSSION

The foreign body reaction is a well-researched topic, mainly for the interest in the body reaction to foreign implanted materials. The medical community gains most of the knowledge through in vitro and in vivo animal experiments, as well as implants extracted and examined [6-9]. Therefore, it is interesting in our opinion to visualize the natural history of the foreign body response.

CONCLUSION

The encapsulation of the foreign body was complete at four weeks following its entry to the human digit in this case. The encapsulation rate might be determined by type of the foreign body. This assumption needs further investigation.

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Figure 1: The glass splinter In Situ – arrow showing the reactive surrounding tissue

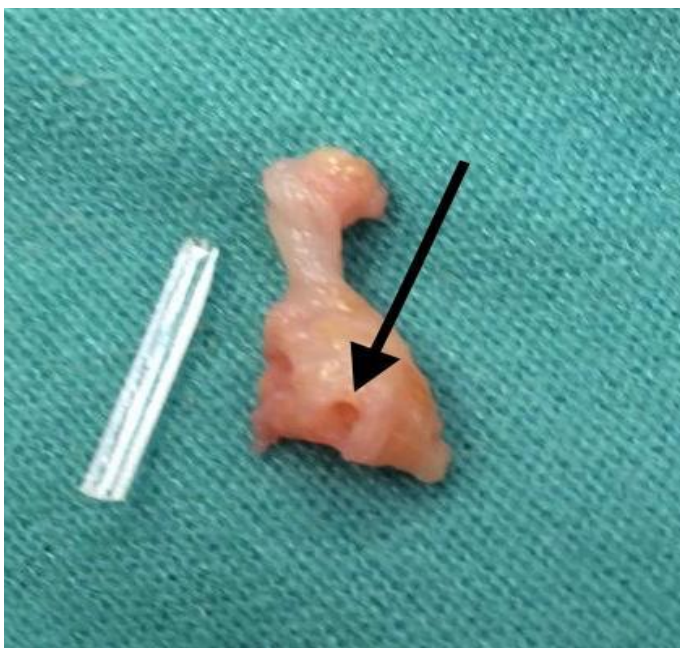


Figure 2: The glass splinter removed from the tissue. Note marsupialization of the foreign body surroundings entrance to the pocket depicted by the arrow

Conflicts of interest

The author reports no conflicts of interest.

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