1- Introduction

- Pacinian corpuscles are the only sensory end-organ receptors large enough to be identified by the naked human eye.
- They are rapidly adapting mechanoreceptors and they are distributed in the dermis of fingers and palm of the hand.
- They are close to arteriovenous anastomosis and it is assumed that they play a role in local blood supply regulation.
- Local trauma has been reported as a factor in 50% of cases but the exact pathogenesis of neuroma remains unknown.

2- Case report

- A 71-year-old, right-handed, diabetic, retired male presented with a two months’ history of progressive pain and swelling over the volar surface of the proximal phalanx of his left index finger. He was diagnosed of tenosynovitis resistant to non-operative treatment and surgical synovectomy was proposed.
- In the subcutaneous plane, a spherical, gray lesion representing clusters, was identified close to the digital ulnar nerve (A). These lesions were excised and sent for pathologic examination (B) and reported as nodular structures laminated in concentric layers that resemble Pacinian corpuscles enlarged in size with some peripheral nerve fibers and chronic inflammatory infiltrate. Positive staining to S100 protein in the inner layers and to epithelial membrane antigen in the outer layers. Findings compatible with neuroma of the Pacinian corpuscles.

- Two years later, the patient reported the same symptoms but in his right index finger and, in the subcutaneous tissue, similar findings of spherical, gray, clustered lesions were identified around the radial digital nerve (C). Pathology diagnosis was multiple nodular structures laminated with some peripheral nerve tracts. Immunohistochemistry was positive to S100 protein in the central axis and to epithelial membrane antigen in the capsule. Hyperplasia or neuroma of the Pacinian corpuscles.
- At four years follow-up after surgery on the left index finger and two years after surgery on the right index finger the patient remains asymptomatic.

3- Conclusions

- Pacinian corpuscle neuroma is a rare, but possible, cause for pain in hand
- All complementary exams are normal
- Definitive diagnosis of Pacinian neuroma is made in the operating room and confirmed by pathological study
- Complete surgical excision seems to be curative as occurred in all published cases and in both cases in our report.