## **EDITOR'S CUTTING EDGE**



# diagnostic <u>challenge</u> Answers

## Case 1

### 1. Diagnosis:

Kienbock disease.

### 2. Investigations:

MRI to check for avascular necrosis.

#### 3. Treatment:

Partial wrist fusion.

### Discussion:

Kienbock disease is a vascular necrosis of the lunate whose definitive cause is not known. Peculiar blood supply of the lunate is mostly held responsible which when obliterated, leads to progressive death and destruction of the bone (Table 1).

Most commonly males, between 20 and 40 years of age are affected. Some of the recognized factors responsible are negative ulnar variance ( too short of ulna at the distal radioulnar joint, decreased radial inclination and repetitive trauma). Symptoms are usually gradual and progressive in nature. Treatment is with pain killers in the early stages. Later on the disease progression and stage determines the options available.

Treatment depends upon the stage of the disease. Only in Stage I conservative management is possible. Later on or after failure of conservative management, the patient should be referred to an orthopedic / hand surgeon for the best outcome.

Table1: Lichtman Classification of Kienbock disease.

| Stage      | Description                             | Treatment                  |
|------------|---|----------------------------|
| Stage I    | No visible X-ray changes                | Immobilization             |
|            | Only changes on MRI                     | NSAIDS                     |
| Stage II   | Sclerosis of lunate                     | Joint leveling procedures  |
| Stage IIIA | Lunate collapse                         | Same as stage II           |
|            | No scaphoid rotation                    |                            |
| Stage IIIB | Lunate collapse                         | Proximal row carpectomy    |
|            | Fixed Scaphoid rotation                 | STT Fusion                 |
|            | 1                                       | SC fusion                  |
| Stage IV   |   | Wrist fusion               |
|            | Degenerated adjacent intercarpal joints | Proximal row carpectomy    |
|            |   | Limited intercarpal fusion |

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# Answers

# Case 2

### Diagnosis

Drug Induced Gingival Hyperplasia

### Drugs causing Gingival Hyperplasia

- Anticonvulsants
   Phenytoin
   Carbamezipine
- Calcium Channel Blockers Amlodipine Nifedipine Verapamil
- Immunosupressants Cyclosporin

### Discussion

Drug-Induced Gingival Hyperplasia (DIGH) is a pathological enlargement of the gingiva commonly associated with long-term use of specific systemic medications, including anticonvulsants like Phenytoin, immunosuppressants such as Cyclosporine, and Calcium channel blockers like Nifedipine and Amlodipine. Patients typically present with a painless, firm and fibrotic gingival overgrowth that begins at the interdental papillae and may gradually extend to cover the crowns of teeth, most often in the anterior maxillary and mandibular regions. In cases with poor oral hygiene, the gingiva may appear erythematous, inflamed, and prone to bleeding.

The degree of enlargement varies with the type and dosage of the drug, duration of therapy, oral hygiene status, genetic predisposition, and presence of local irritants. The pathophysiology involves increased fibroblast activity leading to excess collagen deposition, compounded by local inflammatory stimuli from plaque.

Diagnosis is primarily clinical and supported by a detailed medical and drug history. Histopathological features include epithelial hyperplasia, elongated rete ridges, and dense collagenous connective tissue with minimal inflammation unless secondarily infected. Management focuses on improving oral hygiene, regular professional cleanings, and if possible, substituting or adjusting the causative medication in coordination with the patient's physician. In severe or unresponsive cases, surgical intervention such as gingivectomy may be required to restore gingival contour and function.

With good plaque control and appropriate treatment, the prognosis is generally favorable, though recurrence is common if risk factors persist, underscoring the importance of long-term follow-up and preventive care.

### **Our Patient**

Our Patient was a severe case of DIGH so a surgical intervention was planned. Gingivectomy was performed under local anesthesia to surgically remove the excess tissue and reestablish a normal gingival contour. In coordination with the patients physician, the causative drug was substituted with an appropriate alternative.

The patient was placed on strict maintenance program with regular follow up visits. At follow up appointments patient demonstrated excellent healing and non recurrence of gingival enlargement.

This successful outcome highlights the importance of combined medical and surgical management ,patient compliance and interprofessional collaboration in treating DGIH.

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