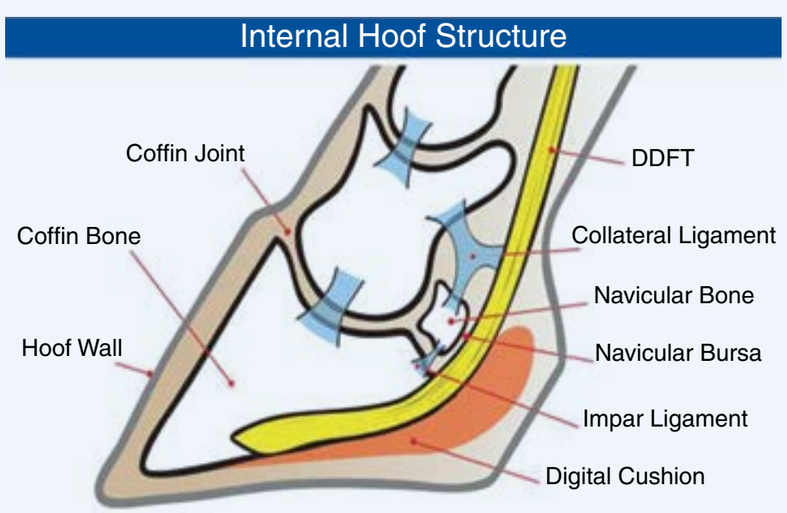
MEDICAL

THE NAVICULAR SYNDROME

By Dr. Ashraf El Kalla

SO MANY TIMES, A HORSE GETS LABELED AS SUFFERING FROM "NAVICULAR," AND PEOPLE GET ANXIOUS, NOT KNOWING HOW TO TREAT OR EVEN VISUALIZE THE PROBLEM. SO HERE'S AN OVERVIEW.

Internal Hoof Structure



Navicular syndrome, often called **Navicular Disease**, is a syndrome of lameness problems in horses. It is most commonly described as an inflammation or degeneration of the navicular bone and its surrounding tissues, usually on the front feet. It can lead to significant and even disabling lameness.

SO WHAT IS THE NAVICULAR BONE (DISTAL SESAMOID BONE?)

The navicular bone is a small bone that sits deep within the hoof at the **back junction** of the coffin bone and the short pastern bone. The navicular bone has the physical shape of a small canoe.

FUNCTION OF THE NAVICULAR BONE

The primary function of the navicular bone is to provide a gliding surface at the point where the deep digital flexor tendon changes angle.

SYMPTOMS

Navicular disease typically affects both front hooves, although one foot is often worse than the other, so your horse may:

1- Initially appear lame on one front leg.

2- On the lunge the horse may show lameness on the inside leg in both directions.

3- You may also notice that he lands with the toe of the hoof first, ahead of the heel.

In addition, navicular generally **worsens** with hard work.

DIAGNOSIS

If you suspect your horse may be suffering from navicular disease, you should contact your vet.

1- They are likely to perform nerve block for the affected area to see if this reduces the lameness.

2- The next step is to X-ray the caudal heel area to determine:

a- Cyst-like lesions within the navicular bone.

b- Degeneration of the flexor surface of the navicular bone.

c- Mineralization or calcification of the ligaments associated with the navicular bone.

Different X-rays showing the variation of shapes

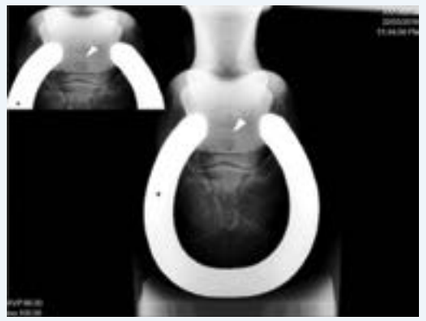
NORMAL

Dosrsoproximal-palmar view left front normal navicular bone

ABNORMAL

Dosrsoproximal-palmar view right front of a navicular bone multiple large lucent zones along distalpart.

ABNORMAL



Dosrsoproximal-palmar view of right front of a navicular bone showing cyst like lesion

Diagram of a navicular bone showing distal nutrient foramina (synovial invaginations) of different shapes

Treatment

Medication generally involves the use of:

1-Non-steroidal anti-inflammatory drug (NSAID) drug such as **phenylbutazone** (Bute).

2-Isoxsuprine, which is a vasodilator and addresses the decreased blood flow aspects of these disease processes. The effectiveness of **isoxsuprine** in the treatment of navicular syndrome is somewhat controversial, with some research showing a positive response and some not supporting its use.

3-**Bisphosphonates** to regulate bone metabolism through inhibition of bone resorption and to bring the balance of osteoclast and osteoblast activity back to normal by reducing the activity of osteoclasts and its way better than Tildren.

4-Many cases of navicular syndrome respond to therapeutic shoeing. **Radiographs** can guide trimming and shoeing decisions. They help the veterinarian and farrier determine exactly how much foot they can manipulate and we recommend the **Colleoni PPSC aluminum shoe** as it gives more support to the horse.

Colleoni PPSC aluminum shoe