

PROJECT PRAKASH

Programmed Approach to Knowledge and Sensitization on Hepatitis

HEPATITIS INDUCTION PROGRAM FOR NURSES

ROLE OF FIBROSCAN IN CONTEXT OF VH

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Role of Fibroscan in VH – Seena Babu

OVERVIEW OF VIRAL HEPATITIS – Dr. Archana R.

Introduction

- Fibroscan is a machine developed by Echosence, France which utilizes a form of ultrasonography to measure the stiffness of the liver without entering it.



Role of Fibroscan in VH – Seena Babu

What is liver fibrosis & cirrhosis

- Liver is a vital organ that performs more than hundreds of functions. Any chronic diseases, addictions, infections, metabolic problems, certain drugs may cause liver fibrosis (*scarring of liver tissues*).
- This leads to stiffness of liver which hampers its functioning. In later stages liver fibrosis leads to liver cirrhosis

How does the Fibroscan work..

- The fibroscan machine uses a probe, similar to an ultrasound probe..which is kept on the right lower chest wall of the patient, just by pressing a button the probe sends a shear wave in to the liver that vibrates the liver and detects the stiffness of the liver this data automatically transfer to the on-board computer and liver stiffness is displayed on the screen.

Cont..

- Ten such readings are recorded, the result is delivered at the end of ten acquisitions in KPA .with IQR (inter quartile range)less than 30% and successive rate of 100%
- Additional facility with fibroscan other than liver stiffness ,quantity of fat content also can check through CAP (control atteunation parameter)

Positioning & preparation of patient

- Patient lies on his /her back right arm raised behind the head. Measurement is made through the intercostal space
- No preparation is required . Preferably on fasting or 2- 3 hrs after a meal.(heavy meal can over estimate the stiffness and CAP value)

Probes..

3 probes are available:

1. Medium probe – for normal adult
2. XL probe - for obese adult
3. Small probe - for children: Two version available with small probe
 - S1 probe for children less than 5 yrs
 - S2 probe for children less than 14 yrs

Normal value of fibroscan

- Normal liver stiffness is less than 6 kpa
- Fibrosis stage - From 6kpa – 11 kpa
- Cirrhosis stage –from 12 kpa
- Maximum stiffness can measured is- 75 kpa
- Normal CAP value is 200 db/m
- Maximum range is 400db /m

Indications for fibroscan

- For the work up of incidental detection of hepatitis B & hepatitis C
- Before initiating antiviral therapy for hepatitis B & hepatitis C
- For monitoring of antiviral therapy
- For the work up of cirrhosis of liver
- Prediction of decompensation in stable cirrhotic patients
- For assessing quantity of fat in the liver, fibrosis

Cont..

- For assessing liver status in patients with diabetics, obesity, metabolic syndrome
- Alcoholic patient suspected to have cirrhosis of liver
- Indicated as part of pre transplant work up in both donor and recipient
- Assessing the risk factor of HCC
- Pre and post assessment of vascular procedures

Benefits of fibroscan

- Non invasive
- Safe procedure
- Quick, time saving
- Replace liver biopsy to some extent
- Easy to perform
- No need rest after procedure

Limitation of fibroscan

- Pregnancy (2-3 trimester)
- Morbid obesity
- Patients with Ascites

Thank you!