NEONATAL PYLORIC STENOSIS

ULTRASOUND PROTOCOL

UW Medicine

BILLING CODE: UABDL

PATIENT PREP: PREFERABLY 2-3 HRS, COORDINATE WITH CARE TEAM.
To better visualize the pylorus, and to insure we are seeing fluid pass through the pylorus at the time of exam, it is best to have the patient be NPO for at least 2-3 hours. Coordinate with the team on care/feeding times, which are often every three hours. Let the care team know you need assistance giving the baby fluids during the exam. If Pedialyte or "Sweeties" is available, it is preferred over milk to reduce artifact. If it is not possible to have the patient NPO, this study cans still be performed.

TRANSDUCER SELECTION: High frequency L12 or L18 linear probe

****Exams are usually done in the NICU, where there are strict disinfection guidelines. All personnel entering the NICU must use good hand washing technique along with use of disinfecting gel.**

****Upon arrival to the neonatal unit, you must wash your hands and arms up to your elbow. At UW Montlake, the hand washing station is located in the hall to the left of the elevators. ALSO BE SURE TO SIGN THE STAFF/VISTOR LOG that is hanging near the hand washing station.**

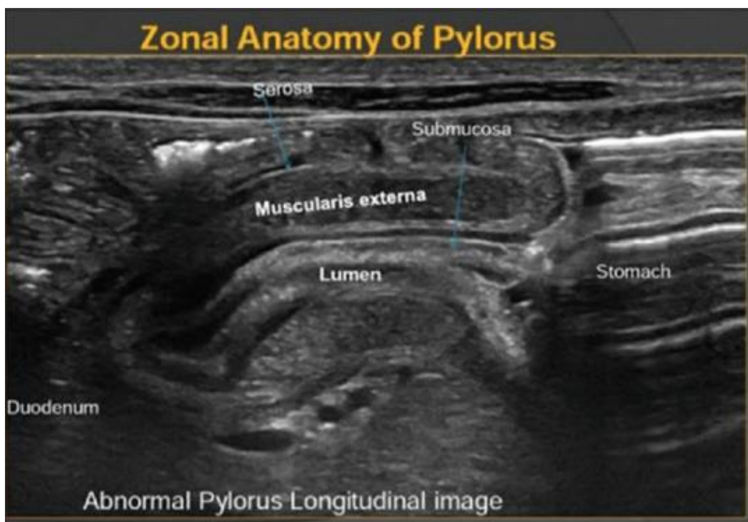
****Always read the sign on the patient door. If the patient is in isolation, follow the instructions. If there is a sign that says "72," that means that they baby is in its first 72 hours of life, and you need to contact the RN before going in.**

****If the patient is in isolation, then the sonographer should wear a blue plastic gown. Please let the RN know that you are coming up or that you**

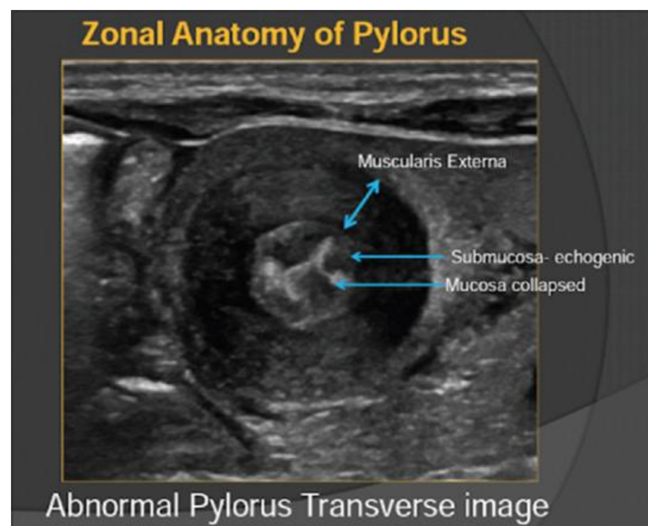
have arrived before starting the exam.

****Thoroughly clean the transducer and machine with Oxivir wipes between each patient.**

****Individual gel packs must be used to minimize any spread of infection.**



Abnormal Pylorus Longitudinal image



Abnormal Pylorus Transverse image

https://doi.org/10.4103/jiaps.jiaps_18_20

IMAGES TO OBTAIN

If unable to view in supine, turn patient into RLD position to shift stomach and bowel.

SAGITTAL: 2D images of the pylorus in long axis.

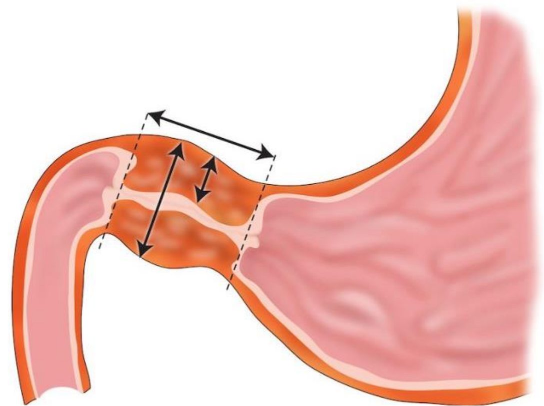
TRANSVERSE: 2D images of the pylorus in a true crossectional plane.

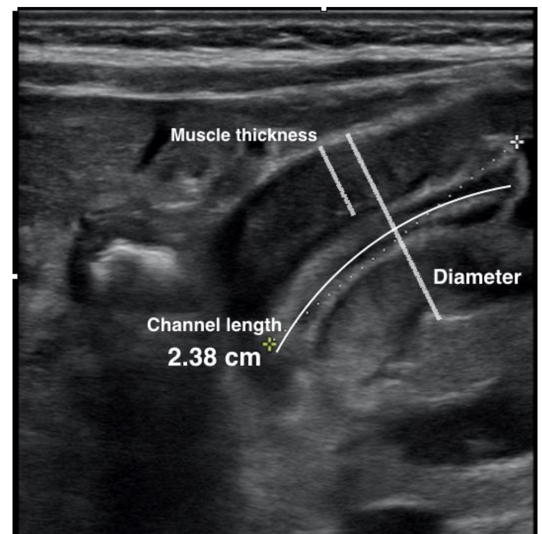
CINE CLIPS to document presence or absence of peristalisis in the pylorus

- The pylorus will remain closed for the entire exam when there is pyloric stenosis. A normal pylorus will have peristalsis similar to other sections of bowel. If it is true pyloric stenosis, a fluid (preferably Pedialyte) will help differentiate between the stomach tissue leading into the pylorus and the actual pylorus itself.

PYLORUS MEASUREMENTS in long axis:

1. Thickness of a single layer of the muscle wall.
   - Normal <2mm
   - Equivical 2-3mm.
   - Diagnostic is 3mm or greater
2. Diameter of entire pylorus.
3. Length of the pylorus. If the pylorus is curved, use the trace measurement tool to make a more accurante measurement.
   - Normal <12mm
   - Equivical 12-15 mm
   - Diagnostic >15mm in conjunction with thickened pyloric muscle.





REFERENCES:

Diagnostic Ultrasound; Rumack, Wilson, Charboneua; third edition

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NEONATAL PYLORUS ULTRASOUND PROTOCOL HISTORY

	Date	Changes made	By whom
Created	03/2019		
Updated	03/2023	Added cine clips of peristalsis	Renee Betit Fitzgerald
Changed	6/28/2024	NPO status changed to 2-3 hrs if possible, to be coordinated with care team	Renee Betit Fitzgerald