Four month-old baby with cyanosis

Isabel Roca
HU Vall Hebron
CLINICAL STATEMENT

- Male child 3 mo old
- Admitted because of cyanosis and hypoxemia, unmodified after $O_2$ therapy
- Chest X-Ray showed an opacity in the left upper field

Contrast-enhanced cardiac US showed a Right-to-left shunt
WHAT TO DO NEXT?

1. CT scan
2. Perfusion lung scan
3. MRI
4. Cardiosurgery
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PERFUSION LUNG SCAN

Cold defect at the left upper lobe
Hypoperfusion of the whole left lung
Systemic activity: Right-to-Left shunt

QS/QP ratio = 1.28
WHAT TO DO NEXT?

1. CT scan
2. Pulmonary artery angiography
3. MRI
4. Cardiosurgery
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Treatment: selective embolisation
FOLLOW-UP

Chest x-ray

Perfusion lung scan

• No systemic activity
CLINICAL FOLLOW-UP

8 months later
relapse of cyanosis and hypoxemia, unmodified after
O\textsubscript{2} therapy

WHAT TO DO NEXT?

1. CT scan
2. Perfusion lung scan
3. MRI
4. Cardiosurgery
CLINICAL FOLLOW-UP

8 months later
relapse of cyanosis and hypoxemia, unmodified after
O₂ therapy

WHAT TO DO NEXT?

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Systemic activity
Right-to-left shunt
QS/QP ratio 1.25:1
• Pulmonary arterovenous fistulae may be multiple, and they may open at different ages.

• Perfusion lung scan allows a non-invasive, sensitive and reproducible quantification of right-to-left shunts, that correlates with hypoxemia.