A 4-months old infant with tricky coronary echocardiographic images: how clinical features must always guide ultrasound examination

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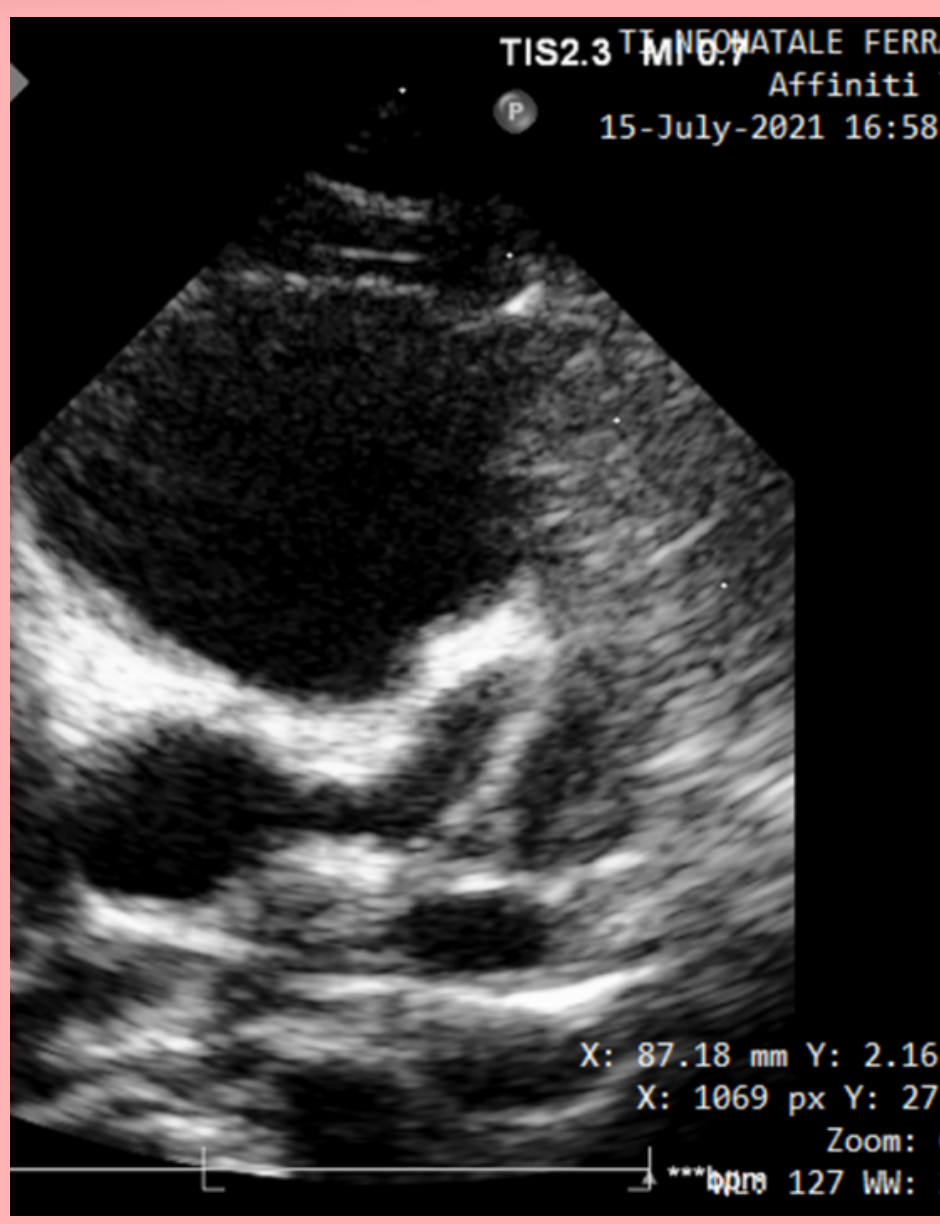
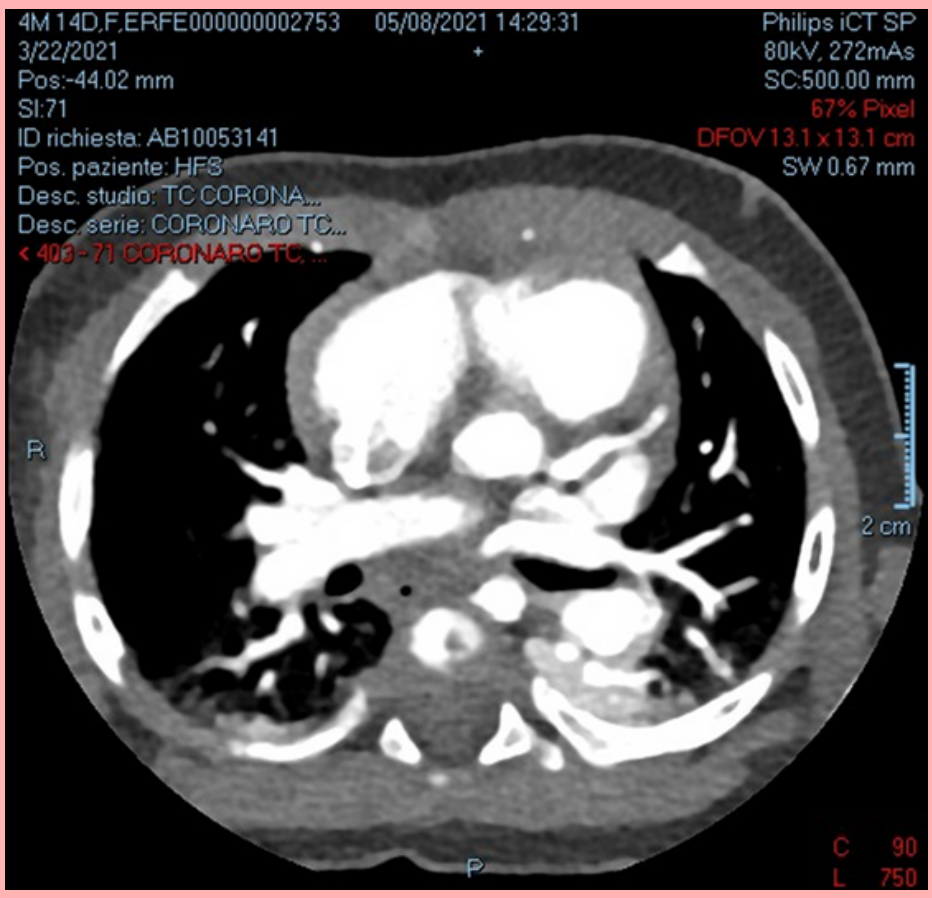
Case Report

A 4-months old female infant, previously healthy, developed hyperpyrexia with maculopapular rash on her trunk, treated with amoxicillin and clavulanic acid without benefit. After 4 days, because of a non-resolution of the clinical features, she was admitted to our hospital in good clinical condition, with still high-grade fever, no more rash and 2/6 Levine systolic murmur.
Laboratory findings showed a remarkably high inflammatory indices (PCR 14.28 mg/dl, VES 85 mm/h) and high platelets count (895.000/mmc) with a normal total blood count and both negative blood culture and viral sierologies.

She was referred to paediatric cardiologist for prolonged fever. ECG was normal for age.
At TTE a 9-millimeter atrial septum defect was detected with left to right shunt and moderate right heart dilatation. Normal left ventricle contraction and dimensions. A suspicious coronary fistula between LAD and LPA with a remarkable dilatation of LMCA (2.74 mm z score +4.15), LAD (3.95 mm z score +7.46) and also both proximal (2.7 mm z score +4.68) and mid (1.9 mm z score 2.86) right coronary artery was found. (IMG1)



IMG 1



Intravenous immunoglobulin (2 g/kg) and acetylsalicylic acid treatment (5 mg/kg) were prescribed because we could not certainly exclude an incomplete Kawasaki Disease.
In order to rule out if ultrasound findings could support diagnosis of incomplete KD or refer to a coronary fistula a coronary computed tomography has been performed (IMG 2) and it has rejected the hypothesis of a coronary fistula because of the absence of abnormal connections between the distinct anatomical sites.

IMG 2

A strict follow-up showed a partially improving of coronary dilatation (LMA 2.4 mm z score 2.56, LAD 2.8 mm z score 5.88, proximal RCA 2.2 mm z score 2.6). Seven months later coronary dilatation has not been detected anymore and it could have been possible to stop acetylsalicylic acid treatment. We now will check our patient into 2 years.

Conclusion

Kawasaki Disease is really uncommon under one age of year, as rare are also coronary fistulas. Incidental finding of atrial septal defect with a dilation of right ventricle with a pulmonary hyperflow could on one hand have masked the absence of connection between LAD and left pulmonary artery and on the other hand mimic a coronary fistula draining in left pulmonary artery. With all these tricky factors, we decided to treat our patient as a KD and it has revealed to be the right strategy, as showed by the great outcome our patient achieved.

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