Prognosis implications of intimal disruption in type B acute aortic syndrome

Background
Intimal disruption (ID) in the acute phase of type B acute aortic syndromes (AAS) is detected in all patients with aortic dissection (AD), but only in a few cases with intramural haematoma (IMH).

Objectives
To compare morbidity and mortality of type B AD vs IMH with and without ID in acute phase.

Methods
One hundred and seventy-one patients, 80 (47%) AD (fig.1A), 86 (50%) IMH without ID (fig.1B) and 5 (3%) IMH with ID (fig.1C), were included prospectively in a clinical and imaging protocol. ID was defined as the presence of an intimal disruption in the aortic wall >3mm. Aortic and overall mortality, required invasive treatments, visceral/peripheral ischemia and maximum aortic diameter (MAD) were analysed during the acute phase.

Results
Patients with IMH and ID were older (IMH with ID: 73.6±13.6, IMH without ID: 65.5±10.1, AD: 56.3±12.4 years; p<0.001) and presented a higher MAD at diagnosis (IMH with ID: 55.6±12.7, IMH without ID: 41.5±8.3, AD: 41.1±8.8 years; p=0.02). During the hospitalization, IMH with ID showed a higher aortic mortality in comparison with AD and IMH without ID (60% vs 14% vs 0%; p<0.001) and a higher number of cases treated invasively (60% vs 8% vs 1%; p<0.001).

Conclusions
Although AD has higher mortality than IMH in type B AAS, development of ID in acute phase of IMH implies a high risk of aortic complications. Urgent invasive treatment is advisable in these cases.

Figure 1.