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‘WITH A LITTLE HELP FROM MY FRIENDS’: MANAGING A COMPLEX CASE OF SUSPECTED RECURRENT INFECTION IN A 7-YEAR-OLD GIRL IN HERAT, AFGHANISTAN

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INTRODUCTION

The diagnosis and management of complex cases can be challenging in resource-limited settings. As the paediatric referral centre for the province, many such patients are seen in the MSF paediatric intensive care unit at Herat Regional Hospital.

CASE DESCRIPTION

Admission

A 7 year old girl presented with a 12-day history of cough and 10 days of fever. She had a past medical history of a liver abscess in 2019 and a right-sided empyema in 2021, treated in Pakistan, with no information available regarding causative organism(s). She was commenced on ceftriaxone and cloxacillin for presumed empyema (**Figure 1**), confirmed by the drainage of purulent fluid on chest drain insertion.

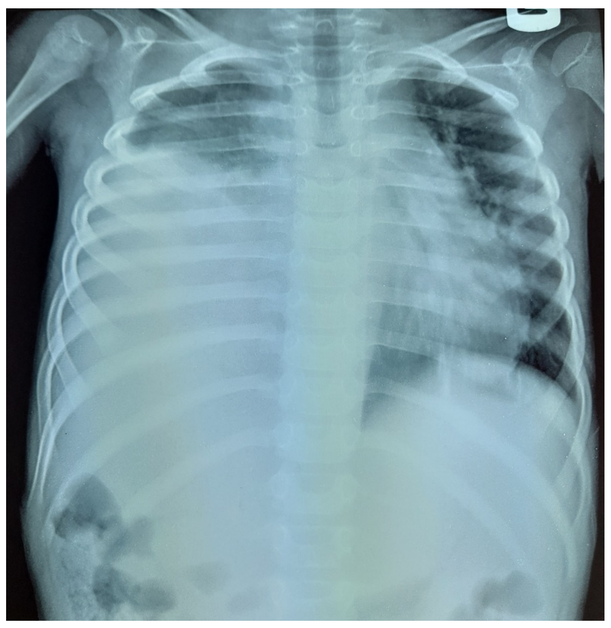

Figure 1: Chest x-ray on admission - right sided pleural effusion and cardiomegaly

Week 2

MSF telemedicine clinical support was requested due to poor response to initial treatment. An echocardiogram and CT scan revealed a pericardial effusion, mediastinal lymphadenopathy, ascites and retroperitoneal fluid. A wide range of differential diagnoses were considered (**Figure 2**). She was commenced on a 6-week course of IV meropenem and 3 weeks of IV clindamycin, tuberculosis treatment (HRZE) with adjunctive corticosteroids, and diuretics.

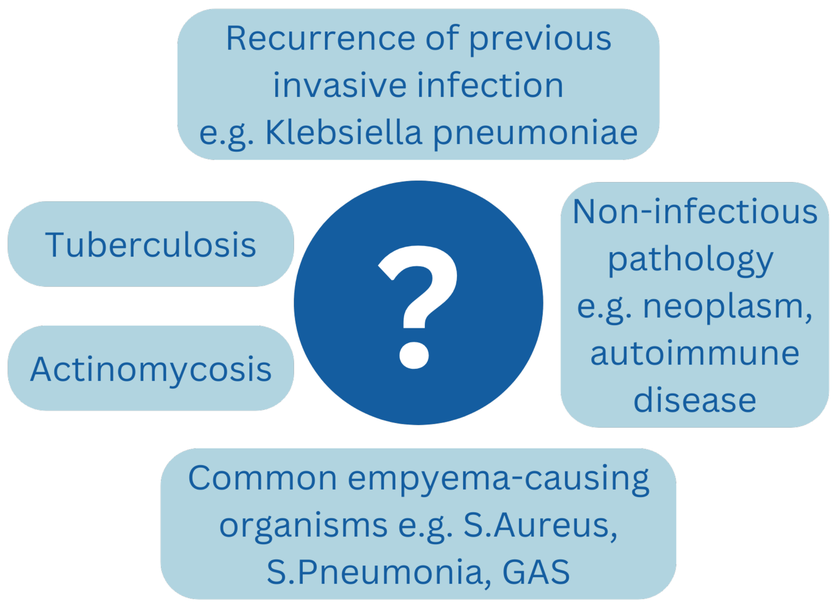

Figure 2: Pictorial summary of differential diagnoses

Week 3

400ml of purulent pericardial fluid was drained by percutaneous pericardiocentesis. Pleural and pericardial fluid were sent for analysis (**Table 1**).

Table 1: Fluid analysis

	Pleural Fluid	Pericardial Fluid
WCC	‘many’	18000/mm^3
Neutrophils	64%	63%
Gene Xpert MTB	Negative	Negative
Gram stain	-	‘few’ Gram +ve cocci

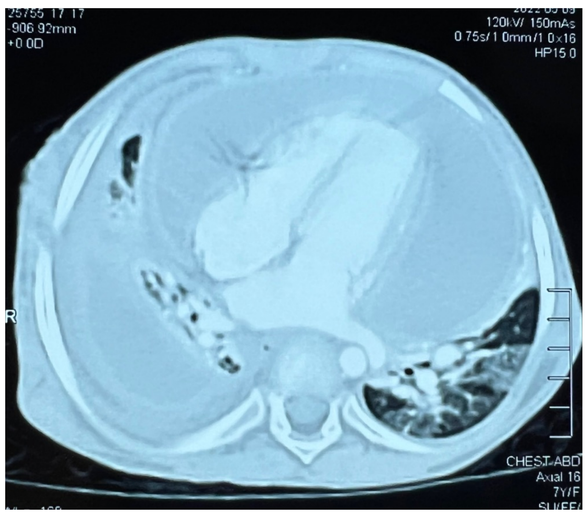

Figure 3: CT image showing pericardial effusion

Weeks 4 to 13

Her clinical course was complicated by recurrence of pericardial effusion (**Figure 3**), with drainage of 650ml of purulent fluid, and recurrence of right-sided pleural fluid. She was treated with a further 4 weeks of IV clindamycin. Extensive discussions were held regarding referral to another healthcare facility in Kabul for higher level care, including surgical treatment of the pericardial effusion. Initially her clinical condition precluded the possibility of transfer, but ultimately we were unable to find a centre to take over her care.

Discharge and Follow-up

A definitive diagnosis was not able to be reached. After 3 months in hospital, she was well enough to be discharged home on tuberculosis treatment and oral diuretics. She was followed up for a month post-discharge, with weaning of diuretics.

Re-Admission and Outcome

She presented with respiratory distress and marked abdominal distension 2 months post-discharge. Investigations showed right-sided pleural effusion, effusive-constrictive pericarditis and massive ascites. Despite treatment with antibiotics and diuretics, she continued to deteriorate and sadly died some weeks later.

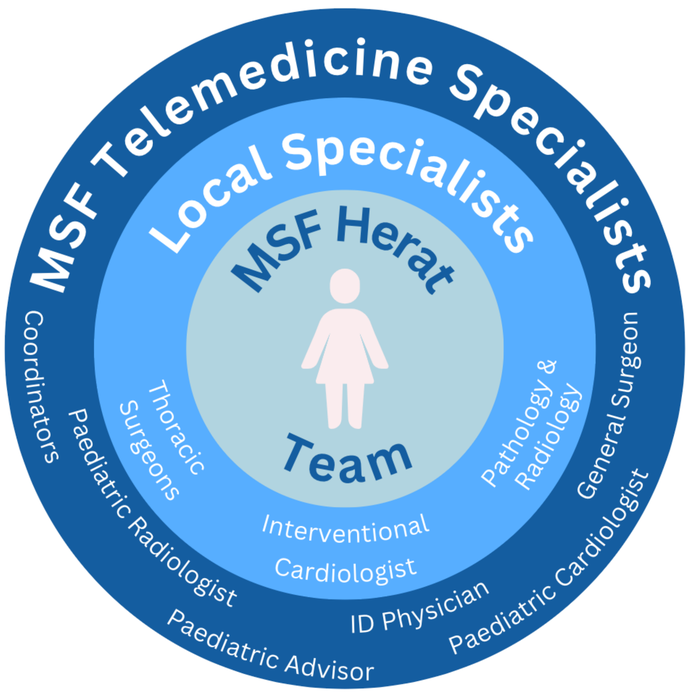

Figure 4: Pictorial summary of those involved in this case

DISCUSSION

The care of this child involved a wide network of healthcare professionals (**Figure 4**). The support provided to the Herat MSF team by specialists, both locally and through the telemedicine platform, was invaluable in the management of this child. We are fortunate in Herat to have access to more advanced imaging modalities, but it can also lead us to discover pathologies for which there is no definitive treatment in Afghanistan. The lack of access to bacterial cultures also impedes our ability to diagnose and effectively treat complex cases such as this.

CONCLUSION

This case illustrates the difficulties faced in managing complex patients in resource-limited settings, especially without access to microbiology investigations. Working in collaboration with the telemedicine platform and local specialists enhances the care and expertise we can provide to patients in our projects.

Ethics Statement: meets the criteria for exemption from MSF Ethics Review Board review, exemption granted by OCP Medical Director