

Investigating attenuation of Type I interferon signalling and pathological immune tolerance in endometriosis.

The leading hypothesis behind development of endometriosis is retrograde menstruation, where endometrial tissue is refluxed into the peritoneal cavity. However, this is a common occurrence amongst menstruating people and only 1/10 go on to develop endometriosis. What mechanism is preventing the refluxed tissue from developing into the progressive lesions which characterise the disease?

Type I interferon signalling mobilises the immune system to clear damaged or infected cells and could be a contributing factor in the clearance of refluxed endometrial tissue. If this signalling becomes attenuated, refluxed tissue would then be tolerated by the immune system and allowed to develop into endometriotic lesions. By analysing existing human and mouse datasets and using a mouse model of endometriosis, investigations can be made into Type I interferon signalling to deduce whether it has a key role to play in the pathogenesis of endometriosis.