Objectives To characterise the novel growth-promoting or suppressing actions of selected Oxovanadium - Response genes, here coded as BRG1-5, and putative suppressor gene PTPRH, through gain/loss-of-function assays and enzyme inhibitory assays in Neuroblastoma cells.

Methods SiRNA and plasmid of the genes were transfected into Neuroblastoma cells; Cell morphology was studied by microscopy, and quantitation of growth was done through resazurin assays. Inhibitors of glycosaminoglycan synthesis, thought to be upstream of BRG3, were assayed using resazurin to check the involvement of glycosaminoglycan signaling in Neuroblastoma cell survival.

Results BRG3 and BRG1 SiRNA transfections generated statistically significant reductions in cell growth on IMR32 ($P=0.000$, $P=0.004$) and Kelly ($P=0.000$, $P=0.001$) Neuroblastoma cells.

BRG3 and BRG1 plasmid transfection induced growth suppression or promotion, respectively, to varying degrees in 293T, IMR32 and Kelly. PTPRH induced growth suppression ($p=0.001$). Additionally, the genes had morphological effects on transfected cells. BRG3 protein was located on microtubules during mitosis, BRG1 was located in round, elongated protrusions, potentially invadopodia.

Glycosaminoglycan synthesis inhibitor 4MU significantly reduced cell survival, with EC₅₀ (SD) in Kelly, IMR32, SKNSH cells of 0.45 mM (0.037), 0.32 mM (0.086), and 0.11 mM (0.054), respectively. These results indicate that Glycosaminoglycan signaling protein BRG3 is of particular interest to pursue as a therapeutic target.

Conclusion This study identified the growth-promoting and suppressing effects of the novel genes in Neuroblastoma and confirmed the morphological location of the proteins in some Neuroblastoma cell lines. In addition, it estimated the response to Glycosaminoglycan synthesis inhibitor and calculated the EC₅₀. This Glycosaminoglycan pathway, potentially acting via BRG3, could present a route for defining a new target treatment for Neuroblastoma. The novel BRG3 data may be of particular interest, since BRG3 is implicated in other cancers, but not so far in Neuroblastoma.

P566

EBV RELATED AUTOIMMUNE HAEMOLYTIC ANAEMIA WITH A NEGATIVE DIRECT COOMB'S TEST – A CASE REPORT

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10.1136/archdischild-2019-epa.900

Introduction Epstein-Barr virus (EBV) infections is a common early childhood infection. These infections are usually asymptomatic. Epstein-Barr virus-induced infectious mononucleosis (IM) occurs typically in young adult patients. The most common presentation of IM are fever, malaise, lymphadenopathy and sorethroat. Acute hemolytic anemia is a rare complication, occurs in only 1% to 3% of patients with infectious mononucleosis. Hemolytic anemia is very uncommon in pediatrics and adolescents and EBV is considered an infrequent cause of AIHA.

This case report describes a 14 years old boy, previously well, who presents with history of lethargy, fever, poor

appetite. His symptoms started 5 days earlier. Examination revealed pallor, jaundice, b/l erythematous tonsillar enlargement, cervical lymphadenopathy and splenomegaly. Laboratory test showed a positive monospot test, lymphocytosis, unconjugated hyperbilirubinemia, with hepatic dysfunction (raised ALT/AST). His hemoglobin dropped to 5.1 g/dL, with increased lactate dehydrogenase, and reticulocyte counts. He received a total of 6 units of red blood cell transfusions with no response. His Direct Coomb's Test (DCT) was negative. EBV serology was equivocal and molecular testing was positive. He responded to IV immunoglobulin and oral prednisolone. His hemoglobin and other markers of hemolysis improved gradually within 4–8 weeks of treatment.

Conclusion Epstein-Barr virus infection should be considered as a differential diagnosis of any haemolytic anemia disease. Although, one of the indicators of AIHA is having a positive DCT, a negative DCT can also occur. Treatment with IV immunoglobulin and course corticosteroid appear to be beneficial in these cases.

P567

LEUKAEMIA CUTIS: A RARE MANIFESTATION OF ACUTE LYMPHOBLASTIC LEUKEMIA

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10.1136/archdischild-2019-epa.901

Leukaemia cutis is a broad term used to describe any cutaneous presentation of leukaemia. It is the infiltration of neoplastic leukocytes or their precursors into the epidermis, the dermis, or the subcutis. The appearance of these lesions is variable and may include flesh-coloured to violaceous papules, plaques, or nodules. We present the case report of a 4-year-old Caucasian girl who presented with a cutaneous lesion which ultimately led to the diagnosis of leukaemia (ALL).

Our patient first presented to the Emergency Department of her local unit with complaints of right ankle pain and swelling which persisted after a minor injury. She was treated conservatively, and pain resolved over a month. FBC was normal, and she had a CRP of 31 and an ESR of 83, which were normal on repeat bloods after 2 weeks.

She represented 4 months later complaining of painful wrists. There was a well-demarcated soft tissue swelling above the right supraorbital ridge, which was raised, had a bluish hue and measured approximately 3 × 1 cm. Parents had initially noticed an area of hypopigmentation which subsequently developed into the swelling described. There was no history of weight loss, pallor, easy bruising, night sweats or excessive fatigue. She was a previously healthy child. She was admitted for medical investigations to rule out connective tissue disorders and malignancy. Blood investigations were normal and abdominal ultrasound showed no masses or hepatomegaly. Cranial CT imaging revealed a 3 × 1 cm soft tissue swelling with no attachment to the underlying bone. A biopsy of the rapidly enlarging lesion revealed blasts cells, consistent with a diagnosis of precursor B-cell leukaemia. Subsequent blood tests confirmed the presence of circulating blasts, despite serial full blood counts over the previous 7 months being normal. She was commenced on UK ALL Regimen A Protocol. The skin lesion involuted with treatment.