Contents lists available at ScienceDirect

Asian Pacific Journal of Tropical Biomedicine

journal homepage:www.elsevier.com/locate/apjtb

Document heading

Antigolgi antibodies in a case of autoimmune haemolytic anemia: a case report

PV Chaitanya Varma*, Shrikiran A Hebbar, Ramesh Y Bhat, Suneel C Mundkur, Karthick Annamalai, Sonia Bhatt

Department of Paediatrics, Kasturba Medical College, Manipal, Karnataka, India

ARTICLE INFO

Article history:
Received 13 January 2012
Received in revised form 21 January 2012
Accepted 1 March 2012
Available online 28 April 2012

Keywords:
Antigolgi antibodies
Autoimmune haemolytic anemia
Connective tissue disorders
Immunofluoroscence

ABSTRACT

Antibodies against the Golgi complex (AGAs) have been reported rarely and are associated with disorders like systemic lupus erythematosus, Sjögren's syndrome and rheumatoid arthritis. We report a case of autoimmune haemolytic anemia with Antigolgi antibodies, the first such case in medical literature.

1. Introduction

Auto antibodies against the Golgi complex were first identified in a patient with Sjögren's syndrome and lymphoma in 1982[1]. Reports describe the presence of anti-Golgi antibodies (AGAs) in connective tissue diseases like systemic lupus erythematosis, Sjogrens syndrome. Autoimmune disorders like rheumatoid arthritis and non immune conditions like idiopathic cerebellar ataxia, viral infections like HIV have been reported in association with Anti Golgi antibodies[2]. There have been no reported cases of AGA in autoimmune haemolytic anaemia. We report such an association in a fifteen year old child, probably the first in literature.

2 Case report

A 15 year old boy presented with progressive lethargy, malaise and yellowish discoloration of eyes for two weeks. On examination he was found to have pallor, icterus and splenomegaly. Investigations revealed severe anaemia (3.1 g/dL), reticulocytosis, unconjugated hyperbilirubinemia, positive direct and indirect coomb's test and positive cold auto antibodies suggestive of autoimmune haemolytic anaemia. Peripheral smear showed anisocytosis, polychromasia and spherocytes. Workup for HIV, hepatitis B, hepatitis A and G 6PD was normal. The child was transfused with compatible packed cells. He was treated with three days of pulse methylprednisolone therapy, followed by oral steroids. The child improved symptomatically and the steroid dose was gradually tapered during subsequent follow up.

The child presented with similar complaints one year later. A routine indirect immunofluoroscence test for antinuclear antibodies revealed high titres of auto antibodies against Golgi apparatus (Hep 2010, granular pattern). The child was restarted on oral steroids following which he became asymptomatic.

3. Discussion

Anti-Golgi antibodies were first described in 1982 by Rodriguez *et al* in a patient with Sjögren's syndrome with a lymphoma[1]. The prevalence of anti Golgi antibodies is extremely low, its reporting is rare and little information is

*Corresponding author: PV Chaitanya Varma, Assistant professor, Department of Paediatrics, Kasturba Medical College, Manipal, Karnataka, India.
E-mail: pvc_varma@yahoo.com

available regarding these particular antibodies. A ten year retrospective study revealed the prevalence to be 0.26%[3]. Stinton *et al* reported a frequency of 0.11%[4].

The indirect immunofluoroscence usually reveals a speckled staining of irregular granules near the nucleus of the cell. Our case had a similar immunofluoroscence granular pattern using the Hep 2010 epithelial cell line[5].

Several clinical correlations have been made in patients with AGA. Studies have suggested a high association with Sjogrens syndrome compared to other connective tissue disorders and a strong association with systemic lupus erythematosus and liver dysfunction[2].

Studies have revealed low prevalence even in patients with Sjogrens syndrome or systemic lupus erythematosus. The specificity is not high as only one of the six patients with high antibody titre had a systemic autoimmune disease. The detection of anti-Golgi autoantibodies is rare, and represents a transitory phenomenon in patients with a viral infection; their presence in high titre in the absence of a clear clinical picture may constitute an early sign of systemic autoimmune disease[6].

Our case report adds to the list of disorders associated with antigolgi antibodies. Though the sensitivity and specifity of this antibody has not been proved, it can have potential pathogenic and diagnostic implications. Further studies are required to establish the importance of this antibody in diagnosis of various diseases.

Conflict of interest statement

We declare that we have no conflict of interest.

References

[1] Rodriguez JL, Gelpi, C, Thomson TM, Real FJ, Fernandez J. Anti-Golgi complex autoantibodies in a patient with Sjögren's syndrome and lymphoma. *Clin Exp Immunol* 1982; **49**: 579-586.

[2] Nozawa K, Fritzler MJ, von Mühlen CA, Chan EKL. Giantin is the major Golgi autoantigen in human anti-Golgi complex sera. Arthritis Res Ther 2004; 6:R95-R102. DOI 10.1186/ar1035.

[3] Vermeersch P, Van den Bergh K, Blockmans D, Westhovens R, Bossuyt X. Anti-Golgi autoantibodies are not clinically associated with systemic autoimmune diseases. *Ann Rheum Dis.*2009; **18**: 283-286.

[4] Stinton LM, Eystathioy T, Selak S, Chan EKL, Fritzler MJ. Autoantibodies to protein transport and messenger RNA processing pathways: endosomes, lysosomes, Golgi complex, proteasomes, assemblyosomes, exosomes, and GW bodies. *Clin Immunol* 2004; **110**: 30-44.

[5] Valaperta S, Alpini C, Bottone MG, Monari M, Assandri R, Montanelli A. Anti-Golgi antibodies: let me look around. *Recenti Prog Med* 2011; **102**(1): 11-13.

[6] Paraná R, Schinoni MI, de Freitas LA, Codes L, Cruz M, Andrade Z. Anti-Golgi complex antibodies during pegylated-interferon therapy for hepatitis C. *Liver Int* 2006; **26**(9): 1148-1154.