Case report: Propylthiouracil- induced ANCA- associated- vasculitis (AAV)

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Abstract

We report a rare case of Propylthiouracil (PTU) induced ANCA-associated- vasculitis (AAV). This young lady with recurrent thyrotoxicosis and positive Thyroid peroxidase and TSH receptor antibodies since 2004 was treated with Carbimazole but was changed to Propylthiouracil(PTU) 100 mg daily during pregnancy in 2012.

She was admitted to our hospital in January 2015 with sore throat, feeling unwell and neutropenia 1.2 (Normal Range:NR: 1.6-7.5) 10*9/L. Thyroid function (TFT)showed TSH <0.02mU/L, FT4 16.8pmol/L and FT3 9.3pmol/L. PTU dose was reduced to 50 mg daily. She was readmitted in March 2015 with rash, (figure 1-4) lethargy and worsening neutropenia (0.95 10*9/L). TFT showed TSH <0.02mU/L and FT4 13.4pmol/L. PTU was immediately stopped due to suspected vasculitis. Investigations revealed high Anti -Neutrophilic Cytoplasmic Antibody (ANCA) levels.

Antibody to proteinase-3 (PR-3) was 102.2 IU/L (NR: 0-1.9) and myeloperoxidase (MPO) was 49.8 IU/L (NR: 0-3.4). Urine albumin creatinine ratio and Computerised tomogram of chest were reported as normal.

She was commenced on Prednisolone 1mg/kg bodyweight. Neutrophils normalised(2.58) within five days of stopping PTU. Her rash improved significantly within 4 weeks and she felt much better. PR-3 and MPO improved rapidly to 55.7 and 47.4 respectively. TFT remain stable (TSH <0.02mU/L, FT4 17.9pmol/L and FT4 5.4pmol/L). Skin biopsy did not reveal any vasculitis. Her response after withdrawal of PTU and steroid treatment is very typical of PTU induced AAV. She is being monitored regularly with TFT and ANCA levels whilst reducing prednisolone dose slowly. She is considering Radio Iodine treatment for thyrotoxicosis.

Figure 1

Figure 2

Figure 3

Figure 4

Conclusion

This case illustrates a relatively rare case of PTU induced AAV. In this particular case, vasculitis confined only to skin without any other organ involvement. PTU induced AAV usually has good prognosis when compared to primary AAV. Most patients respond well within a few weeks to months after stopping Propylthiouracil and treatment with steroids.

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