Antineutrophil cytoplasmic antibody-associated glomerulonephritis with myelodysplastic syndrome and gastric cancer

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Abstract

Introduction
To the best of our knowledge, only two cases of myeloperoxidase-antineutrophil cytoplasmic antibody (MPO–ANCA)-associated crescentic glomerulonephritis with malignancy have been reported. Here we describe a case of MPO–ANCA-associated glomerulonephritis with myelodysplastic syndrome (MDS) and gastric cancer.

Case report
A 62-year-old Japanese female suffering from MDS and poor appetite was admitted to our hospital. Endoscopic and other examinations revealed gastric cancer with multiple metastases. Further, serum creatinine levels gradually increased. Laboratory examination and renal biopsy revealed rapidly progressive glomerulonephritis with MPO–ANCA. Steroid pulse therapy improved her renal function, but gastric cancer with multiple metastases gradually progressed. She grew weak and eventually died.

Conclusion
In patients with MPO–ANCA-associated crescentic glomerulonephritis complicated with malignancies, particularly haematological malignancies, it is important to monitor for vasculitis during the progression of the cancer.

Introduction
In Japan, the incidence of crescentic glomerulonephritis is 1,300–1,600 patients/year1. Approximately 40% of these cases are of the pauci-immune type, and 80% of all cases of the pauci-immune type are MPO–ANCA positive. To the best of our knowledge, only two cases of MPO–ANCA-associated crescentic glomerulonephritis with malignancy have been reported, including a case complicated with malignancies and vacuities2. Komatsu et al. reported a case of myelodysplastic syndrome (MDS) with MPO–ANCA-associated crescentic glomerulonephritis3. Here we describe a case of MPO–ANCA-associated glomerulonephritis with MDS and gastric cancer.

Case report
A 62-year-old female treated with cyclosporine for MDS (refractory anaemia) since 2001 was admitted to the haematology unit of our hospital because of loss of appetite. Gastrointestinal fiberscopy and other examinations revealed that she had gastric cancer with multiple metastases. At the time of admission, her serum creatinine levels gradually increased. Administration of methylprednisolone (250 mg/day for 3 days) failed to improve her renal function because her serum creatinine levels continued to increase to 5 mg/dL.

Consequently, her physician consulted the nephrologist. Laboratory examination revealed that she had rapidly progressive glomerulonephritis with a high MPO–ANCA titer (Table 1 and Table 2). Renal biopsy was performed that revealed crescentic glomerulonephritis (Figure 1).

Immunofluorescence confirmed that it was of the pauci-immune type. Therefore, she was diagnosed as MPO–ANCA-associated glomerulonephritis. Another regimen of methylprednisolone (250 mg/day for 3 days) was prescribed with 40 mg/day of oral prednisolone, leading to a gradual decrease in serum creatinine and MPO–ANCA levels.

Discussion
In this report, we describe a rare case of MPO–ANCA-associated glomerulonephritis rapidly resolved. However, gastric cancer with multiple metastasis continued to progress. She had a poor appetite and often vomited food. She grew weak and eventually died.

Thus, the MPO–ANCA-associated glomerulonephritis rapidly resolved. However, gastric cancer with multiple metastasis continued to progress. She had a poor appetite and often vomited food. She grew weak and eventually died.

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These infections may induce neutrophil activation and systemic vasculitis. Fain et al. reported the characteristics and outcomes of vasculitis associated with malignancies. In their report, malignancies were distributed as follows: haematological in 63.1%, MDS in 32.3%, lymphoid in 29.2%, and solid tumour in 36.9%. It is very interesting that our case was accompanied by both MDS and solid tumour as gastric cancer.

In contrast, several studies reported the incidence of patients developing both vasculitis and malignancies. Vasculitis was detected during the course of malignancies in 2.3%-8% of patients. The frequency of vasculitis during cancer was estimated at 1 in 1,800 for hematologic malignancies and 1 in 80,000 for solid tumour.

**Conclusion**

We presented a case of MPO-ANCA-associated glomerulonephritis with MDS and gastric cancer. Vasculitis accompanied by malignancies, particularly hematologic malignancies, is not so rare, and it is important to pay attention for vasculitis in course of malignancies.

**Consent**

Written informed consent was obtained from the patient’s next of kin for publication of this case report and any accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal.

**Acknowledgement**

The authors would like to thank Enago (www.enago.jp) for the English language review.

**References**


