Monoclonal Gammopathies of Undetermined Significance and Amyloid in Basal Cell Carcinoma: A Hypothesis

Sir,

I read with interest the article by Olsen & Westermark (1) "*Amyloid in Basal Cell Carcinoma and Seborrheic Keratosis*", *Acta Derm Venereol (Stockh) 1994; 74: 273–275.* The study verifies that amyloid deposits are extremely common in basal cell carcinomas (BCCs) and, curiously, they are larger in the subgroup of elderly patients (85%). The amyloid fibrils are composed of fragments of monoclonal immunoglobulin light chains. Monoclonal gammopathies of undetermined significance (MGUS) are the most common immunologic disorder. They probably represent benign tumours of B-cells. The prevalence of MGUS in a healthy population depends both on age and on the population under consideration. Over the age of 25 years it is about 1%, over 50 years it is 1.25%, over 70 years it is 3% and can rise up to 19% over 90 years (some authors believe over 60 years) (1–4). I have compared the frequence of the amyloid deposits reported by Olsen & Westermark (1) with the prevalence of MGUS in a healthy population. They are almost the same. It is possible to hypothesize a correlation between amyloid deposits in elderly patients with BCC and higher prevalence of MGUS in aged people. I believe it would be of some interest for the authors to perform high-resolution electrophoresis on agarose or cellulose acetate in all patients with BCC in order to detect MGUS. A positive correlation between amyloid deposits in the histologic specimens and the presence of MGUS might open up new possibilities in this interesting field.

REFERENCES

1. Olsen KE, Westermark P. Amyloid in basal cell carcinoma and seborrheic keratosis. Acta Derm Venereol (Stockh) 1994; 74: 273–275.
2. Kyle RA. Monoclonal gammopathy of undetermined significance. Am J Med 1978; 64: 814–826.
3. Kyle RA, Garton JP. The spectrum of IgM monoclonal gammopathy in 430 cases. Mayo Clinic Proc 1987; 62: 719–731.
4. Strumìa R, Roveggio C. Le gammopatie monoclonali d'incerto significato in pazienti dermatologici. G Ital Dermatol Venereol 1993; 128: 141–149.
5. Strumìa R, Roveggio C. Kaposi's sarcoma and monoclonal gammopathy. Dermatologica 1994; 188: 76–77.

Accepted October 4, 1994.

R. Strumìa, Clinica Dermatologica, Università di Ferrara, I-44100 Ferrara, Italy.

In Response to the Letter by Strumìa

Dr Strumìa proposes an association between monoclonal gammopathy of undetermined significance and the occurrence of amyloid deposits in basal cell carcinomas. However, only some types of amyloid are derived from monoclonal immunoglobulin light chains. These include primary and myeloma-associated systemic amyloidosis and the rare nodular localized forms of amyloid in the skin (i.e. the AL-amyloidoses). Most other forms of amyloid are not derived from immunoglobulin chains. Although the nature of the amyloid in basal cell carcinomas is still unknown, as is the nature of almost all other types of lozalized skin amyloid, such as the deposits in macular amyloidosis and lichen amyloidosus, evidence indicates that immunoglobulin chains are not involved in any of these. The elucidation of the pathogenesis of these different forms of amyloid has to wait for a biochemical characterization of their fibril subunit protein(s).

Karen Ege Olsen and Per Westermark, Department of Pathology, University Hospital, S-581 85 Linköping, Sweden.