Eye (2003) 17, 3–4

www.nature.com/eye

EDITORIAL

# The prevalence of ocular disease in chronic lymphocytic leukaemia

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*Eye* (2003) **17,** 3–4. doi:10.1038/sj.eye.6700278

Leukaemia is a malignant disorder of white blood cell precursors. The acute forms are more serious and generally affect children. Chronic leukaemia, which can be classified as granulocytic or lymphocytic, is seen in adults. In Western countries, chronic lymphocytic leukaemia (CLL), a malignant disorder of peripheral B cells, is the most common leukaemia, representing about 25% of all forms of leukaemia.[1,2] Although it is estimated that 1000 new cases of CLL are diagnosed each year in the United Kingdom, the prevalence is much higher because of long survival in many cases.[2]

The symptoms related to CLL can be non-specific and up to one-third of cases are diagnosed incidentally.[2] The course of CLL is variable. In about a third of cases CLL has an indolent course, in another third the disease can progress after an initial indolent phase, and in the remaining third, CLL is aggressive from the outset.[1] The extent of CLL is staged using Binet's prognostic classification, which has important therapeutic implications.[3]

Ocular involvement in leukaemia can precede the diagnosis of leukaemia, can occur during the course of the disease, or be a sequel to therapy with steroids, chemotherapy, bone marrow transplantation or total body irradiation. From an aetiopathogenetic standpoint, ocular involvement can be direct as a result of leukaemic infiltration or indirect due to effects of anaemia, thrombocytopenia, hyperviscosity, immunosuppression or infections.[4]

Previous studies have described an overall ocular involvement in 9–90% of cases with leukaemias based on clinical examination[4] or autopsy findings.[5,6] A figure of about 40% based on prospective clinical studies is more realistic.[4,7] However, previously published reports have been biased towards acute leukaemia, with CLL representing less than 1% of all cases in one large series.[4] None of the studies have specifically reported ocular involvement in CLL. The question is pertinent for several reasons: CLL is the most common form of leukaemia; the incidence is rising with increased life span; many patients have mild disease and are expected to have a normal life span; and the therapeutic modalities used to treat CLL are known to cause ocular complications. Also, elderly patients are likely to have unrelated ocular conditions.

In an article published in this issue of *Eye*, Buchnan, McKibbin and Burton report on the prevalence of ocular disease in CLL.[8] In their study, 25 patients attending outpatient clinics (a representative community sample) were recruited over 6 months. Eleven patients had previously received therapy for CLL. Ocular conditions unrelated to CLL were much more frequent than CLL-related findings (52 and 12%, respectively). None of the patients had leukaemic infiltrates. The authors conclude that CLL cases need not be routinely screened.

Although limited by the small number of cases, their findings clearly demonstrate infrequent ocular involvement in CLL. The results are not surprising because of the indolent course of CLL in many cases. The findings are specific to CLL and should not be extrapolated to other forms of leukaemia that have a worse prognosis. Because of low likelihood of ocular involvement in CLL, such cases need not be routinely screened. Nevertheless, each case should be evaluated on its merit because of potentially blinding conditions such as acute retinal necrosis or opportunistic infections reported to have occurred in patients with CLL.[9]

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