Letters to the Editor

Diabetes mellitus in Mali (West Africa)

Dear Sir,

In their excellent study of the prevalence and risk factors for diabetes mellitus in rural Mali (West Africa), Fisch et al. make the following statement: "... studies in urban areas and hospitals indicated a prevalence similar to that observed in Europe and North America" [1]. One of the two references they cite for this is an epidemiological study of diabetes mellitus conducted in Mali in the early 1970's by myself, Dr. Milton B. Handelsman and our Malian colleagues [2]. The statement by Fisch et al. may lead readers to erroneously assume that our epidemiological study was uniquely confined to urban areas. This is not the case at all.

We surveyed three distinct population groups, two of which were rural and only one of which was urban. The two rural population groups included Bambara farmers and Peul pastoralists living in very divergent regions. The urban population studied, which comprised 32% of our total sample, consisted of salaried workers in the country's capital, Bamako [2].

We examined post-load blood samples, unlike Fisch et al. who used fasting specimens. Since the time our study was carried out, the World Health Organization and the National Diabetes Data Group in the United States have established criteria for the diagnosis of diabetes mellitus whose glycaemic standards are somewhat more elevated than those previously used [3, 4]. Yet, from even a cursory examination of Table I in our published paper, it is clear that none of those in our urban group had a post-load blood glucose level above 9.5 mmol/l [2]. Thus, our survey of urban Malians did not reveal a prevalence rate for diabetes mellitus similar to those documented in Europe and North America as implied by Fisch et al. [1]. Among rural Bambara farmers, none had post-load blood glucose level above 9.5 mmol/l. Among rural Peul herdsmen, 6.2% had levels above 9.5 mmol/l.

There is one other misleading statement in the paper by Fisch et al. [1]. They state that they carried out their study according to WHO criteria, and give as the source for these criteria the 1985 WHO Technical Report Series, Diabetes Mellitus [5]. It is the 1980 WHO Technical Report Series on diabetes mellitus [3] that actually lays out the criteria for the diagnosis of diabetes mellitus and not the 1985 report [5].

It is obviously not possible to compare the results of epidemiologic surveys for diabetes mellitus conducted so many years apart by different methods and using different diagnostic criteria. However, it is extremely important that subsequent researchers carefully evaluate the previously published literature on a subject and accurately characterize it.

Yours sincerely,
P.J. Imperato

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Response from the authors

Dear Sir,

In reply to comments made about our paper [1] by Dr Imperato, we would like to say the following.

The controversy about the prevalence rate of diabetes mellitus in tropical Africa is not recent. Some authors, as mentioned by Imperato et al [2], have reported prevalence rates varying between 0 [3] and 10% [4]. However, in hospital-based and urban studies, most authors found prevalence rates similar to those observed in Europe and North America; Imperato et al. reported these results in an excellent review of the literature [2], which we quoted [1].

Imperato et al. then reported results for three population groups which unfortunately were not well-defined with regard to rural/urban origin or nomadic/semi-nomadic lifestyle. Indeed the Fulanis are no longer nomad in Mali and a high proportion [5] have been living in villages and towns for many years, even prior to 1970. On the other hand, it is well known that the African workers employed in an urban company usually live in the suburbs or in villages where their lifestyle does not resemble that of a town-dweller. In addition, there are obviously Fulanis and Bambaras among these workers, some of whom may not have worked in towns for long. It is unfortunate that these data were not specified by Imperato et al.

Thus, without objective criteria for "urbanised population", and without any calculation of significance of the differences observed by Imperato, in a study which lasted five years, we were compelled to apply the usual statistical distribution given by the Malian Ministère du Plan to the raw data supplied by the author.

As regards the criteria for diabetes mellitus, these have indeed been defined in 1980; but in the last official publication by the WHO printed in 1985; only the last reference is usually considered as useful and worth quoting.

Yours sincerely,
A. Fisch, H. Leblanc, E. Pichard and T. Prazuck

References

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