

Letters to the Editor

Discussion of "Bilateral Linear Subconjunctival Hemorrhage in a Trauma Patient"

Sir:

Postmortem conjunctival drying artifact is commonly confused, primarily by lay persons and police officers, with antemortem trauma. These changes are variably red to brown, horizontally situated, sharply circumscribed, and mid-bulbar in configuration. They are usually bilaterally symmetrical.

Having spent the past 14 years interpreting these lesions to the uninitiated, I was astonished to find them suddenly dignified as "an extremely unusual manifestation of . . . gunshot wound of the chest" by Rothouse and Sayers in their article, "Bilateral Linear Subconjunctival Hemorrhage in a Trauma Patient" (Vol. 23, No. 3, July 1978, pp. 519-521). Not surprisingly, the authors were "unable to document [such] hemorrhages from any traumatic cause" in a review of the literature.

What disturbs me far more than the authors' basic misinterpretation here and their absurd rationalization of the finding is the fact that this article could have been accepted for publication in the first place. Such inadequate editorial oversight does a profound disservice to the specialty of forensic pathology as a profession and to the reputation of the *Journal*.

James L. Luke, M.D.
Government of the District of Columbia
Department of Human Resources
Office of the Chief Medical Examiner
19th St. & Massachusetts Ave., S.E.
Washington, D.C. 20003

Sir:

Although I'm sure that others have already brought this to your attention, the readers of the *Journal of Forensic Sciences* should know that the "bilateral linear subconjunctival hemorrhage" described by Rothouse and Sayers in the July 1978 issue is, indeed, an artifact. The changes described are known in the literature as "tâches noires sclérotiques." These were originally described by Sommer in 1833 [1] and are cited in *Gradwohl's Legal Medicine* [2]; on page 98:

If the eyelids remain open in a reasonably dry atmosphere, the sclera to either side of the cornea becomes brown in a matter of hours. The areas of discoloration are triangular, with the base at the periphery of the cornea, the other sides coinciding with the edges of the parted eyelids.

The shape of these varies, depending on the extent to which the eyelids are open; the case in point represents a situation wherein the eyelids were just barely parted at the time of death. From Ref 2, page 102:

Taches noires on the sclerae would indicate that at least 3 hours had elapsed since death.

A microscopic examination, not included within this case report, would have better characterized the pathologic findings identified in the eye in this instance.

James T. Weston, M.D.
Office of the Medical Investigator
School of Medicine
The University of New Mexico
Albuquerque, N. Mex. 87131

References

- [1] Sommer, A. G., "De Signis Mortem Hominis Absolutam Ante Putredinis Accessum Indicantibus," *Hauniae*, Copenhagen, 1833.
- [2] Camps, F. E. (Ed.), *Gradwohl's Legal Medicine*, 2nd ed., John Wright and Sons, Ltd., Bristol, United Kingdom, 1968.

Sir:

I note in the July 1978 issue an article by L. S. Rothouse and R. J. Sayers entitled "Bilateral Linear Subconjunctival Hemorrhage in a Trauma Patient." I wonder who reviewed this article before publication. The "hemorrhage" reported is artifactual and this article should never have been allowed to appear in print. Articles such as this cause the *Journal* to decline in quality and I would hate to see that happen.

Best regards.

Werner U. Spitz, M.D.
Office of the Medical Examiner of Wayne County
400 E. Lafayette St.
Detroit, Mich. 48226

Sir:

As a long-time member of the editorial board of the *Journal of Forensic Sciences*, I feel obliged to write you in regard to the paper by Rothouse and Sayers, "Bilateral Linear Subconjunctival Hemorrhage in a Trauma Patient," appearing in the July 1978 issue.

I would submit that the phenomenon described is no more than that occasionally encountered as a drying artifact of the conjunctivae, also known as tache noir.

I suspect that the paper has been written by well-meaning but inexperienced tyros.

Charles S. Petty, M.D.
Southwestern Institute of Forensic Sciences at Dallas
5230 Medical Center Drive
Dallas, Tex. 75235

Subarachnoid Hemorrhage

Sir:

Fatal subarachnoid hemorrhage secondary to subluxation or fracture of a transverse process of the atlas (causing rupture of a vertebral artery) may occur following a mild to moderate blow to the base of the skull. This has been documented by Contostavlos [1], Cameron and Mant [2], and Simonsen [3]. After recent experience with a similar case, we felt obliged to bring this to the attention of your readers for several reasons:

1. Postmortem radiography with vertebral arteriography and visual examination of the atlas and its associated soft tissues may not be routinely performed in most cases of traumatic subarachnoid hemorrhage. Therefore, the diagnosis of subluxation-fracture of the transverse processes of the atlas with laceration of a vertebral artery cannot be confirmed.

2. Subarachnoid hemorrhage associated with minor to moderate blows to the region of the base of the skull (behind the ear, region of the mastoid process, upper posterolateral neck) occur frequently enough following altercations of possible medicolegal significance (such as fisticuffs, kicks, blows with billy clubs) that the cause for subarachnoid hemorrhage must always be sought. The intensity of the blow is adequate to produce subluxation or fracture of the transverse process of the atlas but is insufficient to cause intracranial arterial rupture, skull fracture, or cerebral contusion.

3. Vertebral artery rupture may occur in most cases of fatal subarachnoid hemorrhage occurring after minor trauma to the skull base in persons with elevated blood alcohol that was previously considered of unknown pathogenesis [4].

Traumatic fatal subarachnoid hemorrhage is common enough that routine exploration of the region of the atlas should not only improve the quality of the autopsy but should also shed additional light on the pathogenesis of some of the associated conditions described above.

Frederick H. Harvey, M.D.
Allen M. Jones, M.S., M.D.
Office of the Medical Investigator
The University of New Mexico
School of Medicine
Albuquerque, N. Mex. 87131

References

- [1] Contostavlos, D. L., "Massive Subarachnoid Hemorrhage Due to Laceration of the Vertebral Artery Associated with Fracture of the Transverse Process of the Atlas," *Journal of Forensic Sciences*, Vol. 16, No. 1, Jan. 1971, pp. 40-56.
- [2] Cameron, J. M. and Mant, A. K., "Fatal Subarachnoid Hemorrhage Associated with Cervical Trauma," *Medicine, Science and the Law*, Vol. 12, No. 1, Jan. 1972, pp. 66-70.
- [3] Simonsen, J., "Massive Subarachnoid Hemorrhage and Fracture of the Transverse Process of the Atlas," *Medicine, Science and the Law*, Vol. 16, No. 1, Jan. 1976, pp. 13-16.
- [4] Simonsen, J., "Traumatic Subarachnoid Hemorrhage in Alcohol Intoxication," *Journal of Forensic Sciences*, Vol. 8, No. 1, Jan. 1963, pp. 97-116.