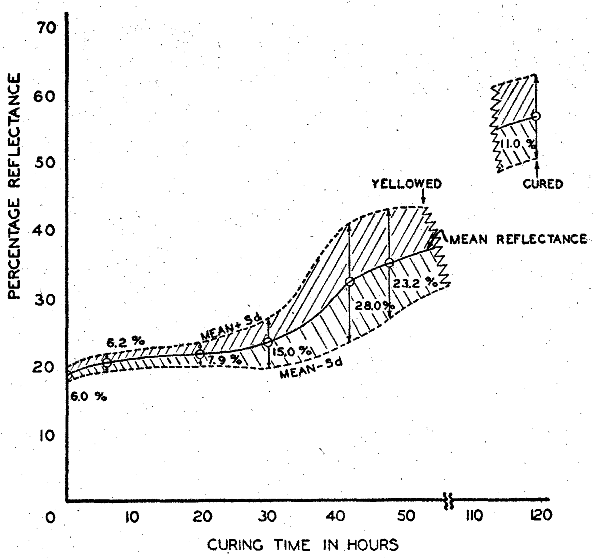

FIG. 5. Changes in the 680 mμ reflectance of tobacco during curing.

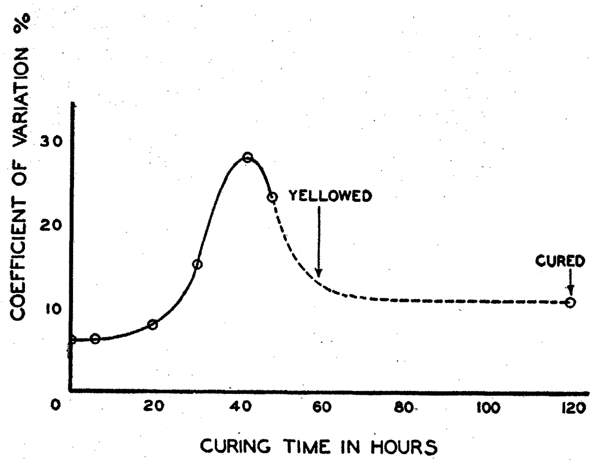

FIG. 6. Variation in the 680 mμ reflectance of tobacco during curing.

yellowing (a sample judged visually to be satisfactorily yellowed would be expected to show a mean 680 mμ reflectance of about 40% on the Yellowmeter) and then declined. After curing was completed, the coefficient of variation was 11%.

Enzymatic activity of the laminal portions of the leaves is arrested through desiccation during the fixing stage of curing; therefore, little further color change would be expected during the final drying phase. For this reason, the curve in Fig. 6 is interpolated essentially horizontally during the drying cycle.

These variable rates of coloring of tobacco are undoubtedly the combined effects of inherent physiological differences between leaves and the curing environment of each particular leaf. That environment is the more important factor might be inferred from the observation that when 2 leaves were hanging close together, such as face-to-face, both leaves would show retarded yellowing. Since both the highly selected leaves and those less carefully selected followed the same pattern in their coloring behavior, this might explain the rather remarkable success of the careful operator in curing out uniformly colored tobacco from leaves that may have been rather carelessly primed for uniform maturity. It should be emphasized, however, that color per se is of only minor direct importance in determining the quality of cured tobacco.

Manuscript received June 4, 1951.

Fasciae Dorsi Variants

George William Cooper[1]

Department of Anatomy,
Louisiana State University School of Medicine,
New Orleans

Incident to routine and certain special dissections it developed that gross anatomical findings upon some fascial entities of the back were different from those recorded in standard textbooks. We wish to place on record such new or apparently unreported observations.

Records that have formulated much of the older, as well as later, concepts upon the gross structure of fasciae are based largely upon studies of adults and the aged. Because of the predilection of collagenous tissues for fusions or adhesions, our work was undertaken on newly born, full-term infants, as well as on adult cadavers. Fascial studies were made upon 6 infants and 6 adults (24 sides), but structural patterns observed by us in 9 student-dissected bodies were totaled with our own dissections (total, 21 cadavers [42 sides]). Routine and special techniques of dissection were employed, such as lateral and medial approach to the field, en bloc resections, variable approaches, etc.

Variations from standard texts were noted in our studies of lumbodorsal fascia. The most striking difference is our finding that the dorsal layer of this fascia (lumbar aponeurosis) sometimes projects rostrad by splitting into anterior and posterior laminae, which ascend as vaginal fasciae covering, respectively, these surfaces of the splenius cervicis and capitis muscles. This pattern was observed in 88.1% of our subjects. A third but diminutive vaginal fascia was projected rostrad as the dorsal covering of the spinalis, semispinalis, and longissimus muscles under the splenii. This layer thickens, however, over the semispinalis capitis in the occipital triangle. (See Fig. 1, paraspinous sagittal section, through bases of transverse processes in the thoracolumbar area and the articular and transverse processes of the cervical vertebrae.)

Fascial planes of the trigonum lumbale (Petiti) were found in homologous structural patterns with those of the occipital triangle, except for numbers of muscles engaged and several other minor variants,

[1] Acknowledgment is made to Charles Mayo Goss, head of the Department of Anatomy, Louisiana State University School of Medicine, for criticisms and suggestions.

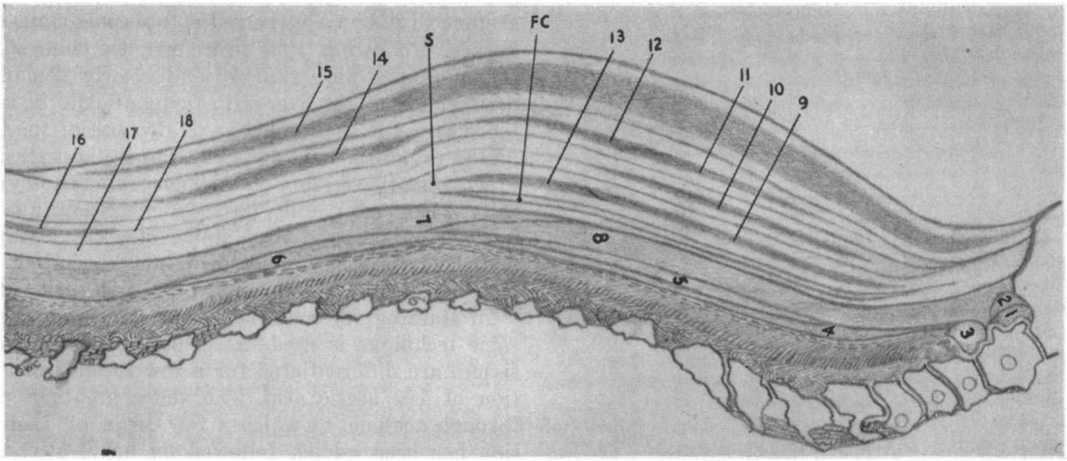

FIG. 1. Fasciae dorsi: 1, rectus capitis posterior minor; 2, rectus capitis posterior major; 3, obliquus capitis inferior; 4, semispinalis cervicis; 5, longissimus capitis; 6, semispinalis dorsi; 7, longissimus dorsi; 8, semispinalis capitis; 9, splenius capitis; 10, serratus posterior superior; 11, rhomboideus minor; 12, rhomboideus major; 13, splenius cervicis; 14, latissimus dorsi; 15, trapezius; 16, serratus posterior inferior; 17, lumbodorsal fascia (dorsal layer); 18, interserratus fascia; *FC*, fascial cleft; *S*, splenius fasciae formed by subdivision of lumbodorsal. (All fasciae schematically accented.)

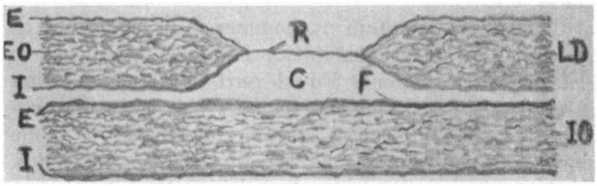

FIG. 2. *E*, External fascia of muscle; *EO*, abdominal oblique, external; *I*, internal fascia of muscle; *IO*, abdominal oblique, internal; *LD*, latissimus dorsi muscle; *R*, roof fascia, trigone (Petiti); *F*, floor fascia, trigone (Petiti); *C*, fascial cleft.

which are universally accepted as proved and require no comment in this critical review for unreported findings. In some bodies we found the trigonum lumbale covered by a roof of conjoined fascia projected laterad from both surfaces of the latissimus dorsi muscle. This laminal roof was split again at the external abdominal oblique to form its external and internal vaginal fasciae. Under this internal fascia and roof fascia was a shallow but sometimes well-defined fascial cleft. The external fascia covering the internal abdominal oblique was found, in these cases, to be the floor fascia of the trigone. A transverse section of the trigone is schematically shown in Fig. 2.

These findings disagree with current concepts and texts, being present in 2 of the 15 adult bodies, as well as in all the infants. The integrating geriatric changes or adhesions incident to muscular rheumatism (fibrositis) may account for statuses that commonly create the illusion of a single fascial layer filling in the trigonum lumbale (Petiti). In 86.6% of our material such integration by fusions or adhesions of fascial components was found in Petit's triangle, but always in adults of advanced age. The two-layered pattern was present in 100% of infants in whom the fascial planes are obviously in the more basic or relatively primordial status of freshness.

Studies upon the serratocostal fascia were included upon 21 cadavers (42 sides), but findings were essentially the same as those found in current literature. We are urged, nevertheless, to accent a circumstance thus far all but universally ignored: the anatomical and surgical significance of the large fascial cleft filled in by this fascia. It is one of the largest in the human body and designed to enhance efficiency of scapular mechanics. In some subjects it was the largest intermuscular fascial cleft, considering both depth and radii of peripheral expansions.

Manuscript received September 20, 1951.

A Simple Method for Staining Trypanosomes and Plasmodia of Malaria in Tissue Sections

R. W. Loehning and H. J. Van Baaren

Departments of Pharmacology* and *Pathology, University of Wisconsin, Madison

A simple, rapid, and dependable method for staining trypanosomes and plasmodia in fixed tissues used by us has been found more efficacious than other methods tried. Hewitt (*1*), commenting on the inadequacy of previously used stains for malaria in tissue sections, recommended a modified Giemsa staining technique, and Shortt and Cooper (*2*) have recently made use of their own modification of this technique. Tomlinson and Grocott (*3*) reported good results for malaria, leishmania, and other parasites by their own technique. Black (*4*) adapted Leishman's stain for malaria.

We have had considerable success in demonstrating malarial plasmodia in tissue sections using the Kingsley stain as originally described (*5*), but with a modification of technique we have found that the stain gave superior results in the demonstration of trypanosomes in tissue sections. Tissues of rats infected with *Trypanosoma equiperdum* and tissues of