



6 May 2008

Dennis Riordan  
Riordan & Horgan  
523 Octavia Street  
San Francisco, CA 94102

RE: Arkansas v. Echols, et al.  
(FSD case 20070413)

Dear Mr. Riordan,

Please permit this letter to serve as a supplemental report of my continued review of materials received in the above case. Specifically this report addresses the review of the submitted histological sections and the production of various injuries attributed to knives.

1. Histological examination

No slide key was received or referenced for any case. Accordingly, where the slides are specifically referenced, I am making my best estimate where the section was obtained.

- a. In the (undesigned) skin sections associated with the extremities (likely slides 1-4) submitted for James Moore (ME-329-93), I found evidence of hemorrhage to some degree in all four slides. Disruption of the epidermis was found in one of the slides. The sections of anal/perianal tissue and of the testes showed no abnormalities. Dr. Peretti reported finding evidence of hemorrhage in three of the four skin slides.
- b. In the (undesigned) skin sections associated with the extremities (likely slides 1-4) submitted for Steve Branch (ME-330-93), I found evidence of hemorrhage (usually small and focal) in all four slides. There was evidence of epidermal thinning with adjacent smudging in three of the four slides, which may grossly represent areas of compression due to the ligatures. In other slides containing squamous epithelium (slides 5-7) no subcutaneous hemorrhage was found and the epithelium was intact. The

sections of anal/perianal tissue and of the testes showed no abnormalities. Dr. Peretti reported finding no evidence of hemorrhage in the skin sections associated with the ligatures (likely slides 1-4) with a focus of epidermal disruption in one of the sites. He reported finding no evidence of hemorrhage in the sections of the penis (likely slides 5-7) with a focus of epithelial disruption in one slide.

- c. In the (undesignated) skin sections associated with the extremities (likely slides 1-4) submitted for Christopher Byers (ME-331-93), I found evidence of hemorrhage in two of the four slides. In one slide there is a focus of epidermal loss (which may be artifactual) and in another section there is a focus of compressed appearing epidermis, which may grossly represent an area of compression due to a ligature. In all of the other sections, except one, no obvious hemorrhage was found. Several of these sections demonstrated significant autolytic changes with evidence of associated bacterial overgrowth and plant material. One section (slide 19), likely representing a portion of penile tissue, showed blood within vascular spaces which focally extended into the interstitium. Dr. Peretti reported no evidence of hemorrhage in any of the submitted sections in this case and found that the epidermis was intact in the sections from the extremities (likely slides 1-4).

2. Comparison of knives to selected wounds

As indicated in my earlier report, it was often difficult to discern from the trial transcripts which wounds were attributed to a knife. I will address three clusters of wounds (one from each child) in which I believe some form of patterned sharp force injury was inferred. In each circumstance, through the use of Photoshop software, the knives and wounds were similarly scaled and overlays with the various weapons and a ruler included in the original photograph of the wound were made. Efforts were made to use rulers closest to the plane of the pictured wound. For ease of reporting below, the knife with the more widely spaced serrations will be referenced as "knife A" and the knife with the variable and focally more closely spaced serrations as "knife B."

- a. A wound on the right upper chest of James Moore (ME-329-93), attached Figures 1 and 2, was compared with the provided photographs of the edges of two knives with different profiles. The injury did not exhibit a pattern compatible with that expected if produced by one of the two knives (e.g. the spacing between the serrations and the abrasions on the skin did not correlate).
- b. A wound on one of the arms of Steve Branch (ME-330-93), attached Figures 3 and 4, was compared with the provided photographs of the edges of two knives with different profiles. I believe this may be the injury which is referred to in the testimony transcript, although it was not

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described in the autopsy report. This injury (with some slight rotation of the knife blade) could have resulted from either knife blade. However, if either of these knives had been responsible for this injury, I would have expected more than two abrasions in this region associated with contact from the other serrations on the blades.

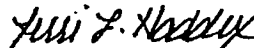
3. Wounds in the perianal region of Christopher Byers (ME-331-93), attached Figures 5-8, were compared with the provided photographs of the edges of two knives with different profiles. With regards to knife A, in neither area (left or right perineal areas) do the serrations align with the injuries on the surface of the skin. With regards to the left perineal region, the skin abrasions are separated by varying distances. In the right perineal region, if the blade had been rotated to such a degree to approximate the spacing of the skin abrasions (e.g. nearly parallel to the abrasions), I would have expected a clear incision, rather than an abrasion, to result. Additionally, similar to the injury of Steve Branch above, if this knife had been responsible for this injury, I would have expected more than two lines of abrasion in this region associated with contact from the other serrations on the blade.

In the left perineal region, similar to knife A, the injuries on the skin do not align with the serrations on knife B. In the right perineal region, there is good alignment with the most closely positioned serrations on knife B; however, given the location of this injury, I would have expected more than two lines of abrasion in this region associated with contact from the other serrations on knife B.

Concordant with my prior report, I again favor that the injury on the right upper chest of James Moore is more likely a consequence of sliding against a roughened surface than having been produced by a serrated blade. The abrasion on the arm of Steve Branch is very non-specific in nature and for the reasons cited above I doubt it was produced by either photographed knife. Lastly, as stated in my earlier report, I believe the genital and perineal injuries are more likely produced by postmortem animal depredation. I think it highly unlikely that either of the two photographed knives were responsible for the injuries in figures 5-8 for the reasons documented above.

Should you have any questions, please do not hesitate to contact me.

Sincerely,



Terri L. Haddix, MD  
Forensic Pathologist

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