nitroso-N-methylurethane (NNMMU) produced histopathologic alteration closely resembling those seen in ARDS while preserving baseline cardiac output. We will wait for studies of hemodynamic effects of CMV + PEEP utilizing NNMMU lung injury model before casting the final vote.

**Bahan Venus, M.D.**  
*Associate Director, Critical Care Medicine*

**Mali Mathru, M.D.**  
*Director, Critical Care Medicine*

**Robert A. Smith, MS, RRT**  
*Technical Director, Critical Care Medicine Research and Training Laboratory*

*Department of Critical Care Medicine*  
*Memorial Medical Center of Jacksonville*  
*3625 University Boulevard South*  
*P.O. Box 16325*  
*Jacksonville, Florida 32216*

**REFERENCES**


(Accepted for publication August 13, 1983.)

---

Anesthesiology  
64:132, 1986

**Benzocaine-induced Methemoglobinemia in Sprague-Dawley Rats**

To the Editor—A current experiment in our laboratory attempts to evaluate neurologic outcome following hypoxic-ischemic stress. Animals are intubated with PE 200 polyethylene tubing cut and tapered to tracheal size for 250- to 350-g male and female Sprague-Dawley rats. To facilitate intubation, catheters were lubricated with Americaine®, an ointment containing 20% benzocaine.

Several animals prepared in this manner were noted to have dark arterial blood in spite of PaO₂ > 100 mmHg. In one instance, blood analyzed by a CO-oximeter® showed oxyhemoglobin as 74% and methemoglobin as 21.1%, while PaO₂ was 125 mmHg.

We subsequently injected one rat subcutaneously with 0.1 ml Americaine®. By 10 min following injection, methemoglobin level increased from control of 0.8% to 28.5%.

It appears, therefore, that Sprague-Dawley rats, like newborn and infant humans¹,² and dogs,³ are deficient in reduced nicotinamide adenine dinucleotide-methemoglobin reductase.

We suggest that benzocaine-containing preparations not be used in rats.

**Isabella Englebach, B.S.**  
**James R. Harp, M.D.**  
*Temple University Hospital*  
*Department of Anesthesiology*  
*3401 North Broad Street*  
*Philadelphia, Pennsylvania 19140*

**REFERENCES**


(Accepted for publication August 13, 1983.)

---

Downloaded From: http://anesthesiology.pubs.asahq.org/pdfaccess.ashx?url=data/journals/jasa/931402/ on 11/24/2018