The Investigation of the Effects of Muslin on Bilirubin to Aid in Curing Jaundice (Phase 3)

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The purpose of this experiment was to find if muslin can allow the ideal amount of light to break down bilirubin while keeping the patient safe during light therapy. I found that natural muslin was the best cloth for curing jaundice in my project last year. I wanted to answer this question and found that non dyed muslin allowed for enough light to get through to the subject to break down bilirubin to an untraceable amount. I determined if muslin was a suitable fabric by mixing two containers of 50 milliliters of urine with 1.25 milligrams bilirubin prior to adding it. I covered the bilirubin and urine mixture with muslin and placed it 50 centimeters away from a bilirubin light for one hour. I placed the other bilirubin cup in complete darkness for 1 hour. Both cups were then tested for bilirubin; a total of eighty-four trials were ran. I found there was no bilirubin in the urine prior to adding it and after an hour under the light. I also found there was consistently 1.25 milligrams of bilirubin in the urine after an hour of complete darkness. This test proves two points. One, muslin could be used to protect a patient undergoing bilirubin treatment as it allows enough light through to break down bilirubin to an untraceable level. Two, these results are further enforced as the bilirubin levels were maintained after an hour in darkness. This proves the bilirubin was not merely merged with the urine.

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