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Discussion

Dr. Edward F. Parker: In closing, I would like to say that the senior author of the paper presented by me was Dr. Darby. Secondly, I would like to congratulate Dr. Sealy on his excellent work. I am sorry to say that we have not had in the laboratory such good results with the combination of hypothermia and bypass. In general our results were poorer with the combination of intentional hypothermia and bypass, than with bypass without intentional hypothermia. However, it should be said that for us it has been difficult in the dog to prevent a little hypothermia during bypass experiments. In our human cases, we have had unintentional hypothermia, down as low as 34° C., with bypass, because of the difficulty in maintaining the temperature of the blood circulating through the extracorporeal system. At present we are concerned with trying to maintain normothermia during operation.

Dr. Will C. Sealy: (closing) I would like to thank Dr. Parker for his discussion. His observations on the heart during controlled standstill are most interesting. Many people have used extracorporeal circulation and hypothermia unintentionally. This may explain some of their good results.

I would like to show an additional slide: This shows the pH, lactic acid and CO_2 level on arterial blood of a patient who has a repair of the tetralogy of Fallot. You can see the perfusion period was of 30 minutes duration. These findings were all within the limits of normal.