
CV for Robert Hahn



1. Name

Robert G. Hahn

2. Birth data

Born in Stockholm, Sweden, on March 14, 1954

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Västra Kanalgatan 21
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5. Courses and degrees

- a. Studies at Dartmouth College, USA, 1973-74.
- b. Läkarexamen (M.D.) Karolinska institutet, 1980.
- c. Diploma i Tropical Medicine, Roslagstulls sjukhus, 1981.
- d. Specialist in anaesthesia & intensive care (Sweden), 1986.
- e. The course "Leaders of the Future", at Karolinska institutet, 1997-98.

6. Doctorial degree. Doktorsexamen (Ph.D.) in anesthesia & intensive Care, 1987. "Fluid balance during transurethral resection of the prostate" (Karolinska institutet). Supervisor: Lars Collste (urologist) and Jan Eklund (anesthesiologist).

8. Associate professor

Docent (Associate Professor), Karolinska institutet, 1990-.

9. Current position

Research Director at Södertälje Hospital, Sweden.

10. Prior positions

Main positions

1979-1993. anaesthetist at Huddinge Hospital (100%).
 1993-1997. "lektor" (associate professor) at Karolinska Institutet, Stockholm (100%).
 1997-2006. full professor, Karolinska Institutet at Söder Hospital, in Stockholm (100%).
 2009-2016. adjunct professor, Linköping University (20% and 30%).
 2016 and 2017 three months/year. Visiting professor at Riga University.

Additonal positions

1997-98. Vice Chairman of the Board for Postgraduate studies, Karolinska institutet.
 1997-98. Chairman of the South Committee for Postgraduate Studies
 1998-2000. Vice Chairman of the Department of Anaesthesia, Söder Hospital.
 1997-2002. Vice Chairman at the Institutionen Söder Hospital, Karolinska institutet.
 1997-2000, and 2002-2005. Dean of Postgraduate Studies at Söder Hospital.
 1997-2000, and 2002-2005. "Ansvarig föreståndare" for the Animal Department at Söder Hospital.
 2011-12. Consultant at Socialstyrelsen for goal-directed fluid therapy and restrictive fluid therapy in the ongoing work with their treatment programme for colon cancer.
 2012-15. Member of the Research Committe of the European Society of Anaesthesiology.
 2015-2017. Swedish representative in the Council of the European Society of Anaesthesiology.

11. Ph.D. education

Hahn has been chief supervisor in 15 completed academic Ph.D. programs in anesthesia and intensive care. In addition, he has served as associate supervisor in 3 completed Ph.D. programs.

11. Selected academic distinctions and other merits

The Matts Halldin price in 2000 for "qualified clinical research and supervising skills of importance to the medical community" Sw. Cr. 20.000.
 The Clinical Scholar Award for the International Anesthesia Research Society (IARS) in 2005, main applicant together with Christer Svensén, US dollars 80.000.
 Best poster at the Swedish Anaesthesia Society's annual meeting in 2004.
 Best scientific article (1st Price in the Radiometer Award) at the Meeting of the Nordic Anaesthetist's Society, Iceland, 2005, DCr 70.000:-.
 Best unpublished scientific article in Sweden (Alvarengas Price), awarded by the Swedish Society of Physicians, in 2006. SwCr 45.000:-
 Participates, as the only Swede, in the international group evaluating the surgical research at Uppsala University in May 2007 and again in May 2011.
 Second-best Abstract in European Anaesthesia; European Society of Anaesthesiologists 2011.
 Best Abstract at the ESRA Meeting in Seville, September 2014.

Chief Editor for two books in anaesthesia:

- a. Hahn-Prough-Svensen (Eds.): *Perioperative Fluid Therapy* (Informa Healthcare, New York 2007)
- b. Hahn (Ed.) *Clinical Fluid Therapy in the Peri-Operative Setting* (Cambridge University Press 2011, 2016).

12. Language skills

Fluent in Swedish and English.

13. List of Publications, see separate list.

Publications by Robert Hahn

I. Original articles in international journals

1. Hildebrand C, Hahn R. Relations between myelin sheath thickness and axon size in spinal chord white matter of some vertebrate species. *J Neurol Sci* 1978; 38: 421-434.
2. Hahn R, Berlin T, Lewenhaupt A. Rapid massive irrigating fluid absorption during transurethral resection of the prostate. *Acta Chir Scand* 1986; suppl 530: 63-65.
3. Hahn RG. Influence of variations in blood haemoglobin concentration on the calculation of blood loss and volumetric irrigating fluid balance during transurethral resection of the prostate. *Br J Anaesth* 1987; 59: 1223-1229.
4. Hahn RG. A haemoglobin dilution method (HDM) for estimation of blood volume variations during transurethral prostatic surgery. *Acta Anaesthesiol Scand* 1987; 31: 572-578.
5. Hahn RG, Berlin T, Lewenhaupt A. Factors influencing the osmolality and the concentrations of blood haemoglobin and electrolytes during transurethral resection of the prostate. *Acta Anaesthesiol Scand* 1987; 31: 601-607.
6. Hahn RG. Decrease in serum potassium concentration during epidural anaesthesia. *Acta Anaesthesiol Scand* 1987; 31: 680-683.
7. Hahn RG. Relations between irrigant absorption rate and hyponatraemia during transurethral resection of the prostate. *Acta Anaesthesiol Scand* 1988; 32: 53-60.
8. Hahn R, Berlin T, Lewenhaupt A. Irrigating fluid absorption and blood loss during transurethral resection of the prostate studied by a regular interval monitoring (RIM) method. *Scand J Urol Nephrol* 1988; 22: 23-30.
9. Hahn RG. Ethanol monitoring of irrigating fluid absorption in transurethral prostatic surgery. *Anesthesiology* 1988; 68: 867-873.
10. Hahn R, Berlin T, Johansson H, Lewenhaupt A. Changes in intravesical pressure during irrigating fluid absorption in transurethral prostatic surgery. *Urol Res* 1988; 16: 281-285.
11. Hahn RG. Serum amino acid patterns and toxicity symptoms following the absorption of irrigant containing glycine in transurethral prostatic surgery. *Acta Anaesthesiol Scand* 1988; 32: 493-501.
12. Hahn RG. Hallucination and visual disturbances during transurethral prostatic resection. *Intensive Care Med* 1988; 14: 668-671.
13. Hahn RG. Blood volume during transurethral prostatic resection. *Acta Anaesthesiol Scand* 1988; 32: 629-637.
14. Hahn RG. Early detection of the TUR syndrome by marking the irrigating fluid with 1% ethanol. *Acta Anaesthesiol Scand* 1989; 33: 146-151.
15. Hahn R, Mjöberg M. Immediate detection of irrigant absorption during transurethral prostatectomy. *Can J Anaesth* 1989; 36: 86-88.

16. Hahn RG. Dilution of blood proteins from irrigant absorption during transurethral prostatectomy. *Scand J Urol Nephrol* 1989; 23: 97-102.
17. Hultén JO, Hahn RG. Monitoring irrigating fluid absorption during transurethral resection of the prostate (TURP): a comparison between 1 and 2% ethanol as a tracer. *Scand J Urol Nephrol* 1989; 23: 103-108.
18. Hahn RG. Estimating allowable blood loss with correction for variations in blood volume. *Acta Anaesthesiol Scand* 1989; 33: 508-512.
19. Hahn RG, Rundgren M. Vasopressin responses during transurethral resection of the prostate. *Br J Anaesth* 1989; 63: 330-336.
20. Hahn RG, Rundgren M. Vasopressin and amino acid concentrations in serum following absorption of irrigating fluid containing glycine and ethanol. *Br J Anaesth* 1989; 63: 337-339.
21. Hahn RG. Glycine irrigation and urinary oxalate excretion. *Br J Urol* 1989; 64: 287-289.
22. Hahn R, Hjelmqvist H, Rundgren M. Effects of isosmotic and hyperosmotic glycine solutions on the fluid balance in conscious sheep. *Prostate* 1989; 15: 71-80.
23. Hahn RG, Stalberg HP, Gustafsson SA. Intravenous infusion of irrigating fluids containing glycine or mannitol with and without ethanol. *J Urol* 1989; 142: 1102-1105.
24. Hahn RG. Acid phosphatase levels in serum during transurethral prostatectomy. *Br J Urol* 1989; 64: 500-503.
25. Hahn RG. Influence of the fluid balance on the cortisol and glucose responses to transurethral prostatic resection. *Acta Anaesthesiol Scand* 1989; 33: 638-641.
26. Hahn R, Algotsson L-Å, Törnebrandt K. Comparison of ethanol absorption during continuous and intermittent flow irrigation in transurethral resection. *Scand J Urol Nephrol* 1990; 24: 27-30.
27. Hahn RG. Fluid and electrolyte dynamics during development of the TURP syndrome. *Br J Urol* 1990; 66: 79-84.
28. Hahn RG. Prevention of the TUR syndrome by detection of trace ethanol in the expired breath. *Anaesthesia* 1990; 45: 577-581.
29. Jones AW, Hahn RG, Stalberg HP. Distribution of ethanol and water between plasma and whole-blood; inter- and intra-subject variations after administration of ethanol by intravenous infusion. *Scand J Clin Lab Invest* 1990; 50: 775-780.
30. Löfgren A, Hahn RG. Serum potassium levels after induction of epidural anaesthesia using mepivacaine with and without adrenaline. *Acta Anaesthesiol Scand* 1991; 35: 170-174.
31. Hahn RG. Blood ammonia concentrations resulting from absorption of irrigating fluid containing glycine and ethanol in transurethral resection of the prostate. *Scand J Urol Nephrol* 1991; 25: 115-119.
32. Hahn RG, Stalberg HP, Gustafsson SA. Vasopressin and cortisol levels in response to glycine infusion. *Scand J Urol Nephrol* 1991; 25: 121-123.
33. Hahn RG, Jones AW, Billing B, Stalberg HP. Expired-breath ethanol measurement in chronic obstructive pulmonary disease: implications for transurethral surgery. *Acta Anaesthesiol Scand* 1991; 35: 393-397.
34. Hahn RG. Dilutional hyponatraemia following transurethral operation for clot retention. *Br J Anaesth* 1991; 67: 339-340.
35. Hahn RG. Calculation of irrigant absorption by measurement of breath alcohol level during transurethral resection of the prostate. *Br J Urol* 1991; 68: 390-393.

36. Hahn RG, Stalberg HP, Ekengren J, Rundgren M. Effects of 1.5% glycine solution with and without ethanol on the fluid balance in elderly men. *Acta Anaesthesiol Scand* 1991; 35: 725-730.
37. Jones AW, Hahn RG, Stalberg HP. Determination of total body water by ethanol dilution: importance of concentration units used in the calculations. *Clin Sci* 1991; 81: 701-702.
38. Hjertberg H, Ekberg S, Hahn R, Hultén J, Jorfeldt L, Svedberg J. Absorption of irrigating fluid during transurethral prostatic resection as measured by ethanol, radioisotopes and regular-interval monitoring. *Urology* 1991; 38: 417-422.
39. Hahn RG. Acid-base status following glycine absorption in transurethral surgery. *Eur J Anaesth* 1992; 9: 1-5.
40. Hahn RG. Haemoglobin dilution from epidural-induced hypotension with and without fluid loading. *Acta Anaesthesiol Scand* 1992; 36: 241-244.
41. Jones AW, Hahn RG, Stalberg HP. Pharmacokinetics of ethanol in plasma and whole blood: estimation of total body water by the dilution principle. *Eur J Clin Pharmacol* 1992; 42: 445-448.
42. Hahn RG, Jones AW, Norberg Å. Abnormal blood-ethanol profile associated with stress. *Clin Chem* 1992; 38: 1193-1194.
43. Löfgren A, Hahn RG. Serum potassium, catecholamine levels and ECG during field block for inguinal hernia surgery. *Acta Anaesthesiol Scand* 1992; 36: 577-582.
44. Hahn R, Essén P, Wernerman J. Amino acid concentrations in plasma and skeletal muscle after transurethral resection syndrome. *Scand J Urol Nephrol* 1992; 26: 235-239.
45. Hahn RG. Amino acid concentrations in serum and urine after intravenous infusion of 1.5% glycine in prostatectomy patients. *Prostate* 1992; 21: 173-181.
46. Stalberg HP, Hahn RG, Jones AW. Ethanol monitoring of transurethral prostatic resection during inhaled anesthesia. *Anesth Analg* 1992; 75: 983-988.
47. Hahn RG. Blood glucose after ethanol monitoring of irrigating fluid absorption in transurethral surgery. *Acta Anaesthesiol Scand* 1993; 37: 166-169.
48. Hahn RG, Ekengren J. Patterns of irrigating fluid absorption during transurethral resection of the prostate as indicated by ethanol. *J Urol* 1993; 149: 502-506.
49. Stalberg HP, Hahn RG, Hjelmqvist H, Ullman J, Rundgren M. Haemodynamics and fluid balance after intravenous infusion of 1.5% glycine in sheep. *Acta Anaesthesiol Scand* 1993; 37: 281-287.
50. Hahn RG. Blood volume at the onset of hypotension in TURP performed during epidural anaesthesia. *Eur J Anaesth* 1993; 10: 219-225.
51. Hahn RG, Löfgren A, Nordin A. Health status and the preoperative change in serum potassium concentration. *Acta Anaesthesiol Scand* 1993; 37: 329-333.
52. Hahn RG. Increased haemodilution in hypotension induced by epidural anaesthesia. *Acta Anaesthesiol Scand* 1993; 37: 357-360.
53. Hahn RG, Olsson J. Intraperitoneal absorption of irrigating fluid during endometrial resection. *Acta Obstet Gynecol Scand* 1993; 72: 402-405.
54. Hahn RG, Ekengren J. Absorption of irrigating fluid and height of fluid bag during transurethral resection of the prostate. *Br J Urol* 1993; 72: 80-83.

55. Hahn RG. Cooling effect from absorption of pre-warmed irrigating fluid in transurethral prostatic resection. *Int Urol Nephrol* 1993; 25: 265-270.
56. Olsson J, Rentzhog L, Hjertberg H, Hahn RG. Reliability of clinical assessment of fluid absorption in transurethral prostatic resection. *Eur Urol* 1993; 24: 262-266.
57. Hahn RG. Dose-dependent half-life of glycine. *Urol Res* 1993; 21: 289-291.
58. Rundgren M, Hjelmqvist H, Gunnarsson U, Hahn RG. Intracerebroventricular infusion of glycine stimulates vasopressin release in conscious sheep. *NeuroReport* 1993; 4: 1052-1054.
59. Hahn RG. Transurethral resection syndrome from extravascular absorption of irrigating fluid. *Scand J Urol Nephrol* 1993; 27: 387-394.
60. Hahn RG. Ethanol monitoring of extravascular absorption of irrigating fluid. *Br J Urol* 1993; 72: 766-769.
61. Ekengren J, Hahn RG. Blood loss during transurethral resection of the prostate as measured with the HemoCue photometer. *Scand J Urol Nephrol* 1993; 27: 501-507.
62. Hahn R, Sikk M. Glycine loading and urinary oxalate excretion. *Urol Int* 1994; 52: 14-16.
63. Hahn R, Essén P. ECG and cardiac enzymes after glycine absorption in transurethral prostatic resection. *Acta Anaesthesiol Scand* 1994; 38: 550-556.
64. Hahn R, Stalberg H, Carlström K, Hjelmqvist H, Ullman J, Rundgren M. Plasma atrial natriuretic peptide concentration and renin activity during overhydration with 1.5% glycine solution in conscious sheep. *Prostate* 1994; 24: 55-61.
65. Ekengren J, Hahn RG. Continuous versus intermittent flow irrigation in transurethral resection of the prostate. *Urology* 1994; 43: 328-332.
66. Nilsson A, Hahn RG. Mental status after transurethral resection of the prostate. *Eur Urol* 1994; 26: 1-5.
67. Löfgren A, Hahn RG. Hypokalemia from intercostal nerve block. *Region Anesth* 1994; 19: 247-254.
68. Hahn RG, Norberg Å, Gabrielsson J, Danielsson A, Jones AW. Eating a meal increases the clearance of ethanol given by intravenous infusion. *Alcohol & Alcoholism* 1994; 29: 673-677.
69. Hahn R, Essén P. Blood coagulation status after transurethral resection of the prostate. *Scand J Urol Nephrol* 1994; 28: 385-390.
70. Hahn RG, Norberg Å, Jones AW. Rate of distribution of ethanol into the total body water. *Am J Therapeut* 1995; 2: 50-56.
71. Ekengren J, Zhang W, Hahn RG. Effects of bladder capacity and height of fluid bag on the intravesical pressure during transurethral resection of the prostate. *Eur Urol* 1995; 27: 26-30.
72. Hahn RG. Transurethral resection syndrome after transurethral resection of bladder tumours. *Can J Anaesth* 1995; 42: 69-72.
73. Hahn R, Andersson T, Sikk M. Eye symptoms, visual evoked potentials and EEG during intravenous infusion of glycine. *Acta Anaesthesiol Scand* 1995; 39: 214-219.
74. Olsson J, Hahn RG. Ethanol monitoring of irrigating fluid absorption in transcervical resection of the endometrium. *Acta Anaesthesiol Scand* 1995; 39: 252-258.
75. Hahn RG, Larsson H, Ribbe T. Continuous monitoring of fluid absorption in transurethral surgery. *Anaesthesia* 1995; 50: 327-331.

76. Zhang W, Hahn RG. Diuretic effects of irrigating fluids containing mannitol and sorbitol. *Scand J Urol Nephrol* 1995; 29: 27-31.
77. Zhang W, Hahn RG, You G, Xu Z. Ultrastructural changes following overhydration with irrigating fluids. *Int Urol Nephrol* 1995; 27: 167-172.
78. Olsson J, Nilsson A, Hahn RG. Symptoms of the transurethral resection syndrome using glycine as the irrigant. *J Urol* 1995; 154: 123-128.
79. Hahn RG. Life-threatening transurethral resection syndrome despite monitoring of fluid absorption with ethanol. *Eur J Anaesth* 1995; 12: 431-433.
80. Zhang WB, Hahn RG. Water and solute dynamics after intravenous infusion of new irrigating fluids in the rabbit. *Scand J Urol Nephrol* 1995; 29: 241-247.
81. Löfgren A, Hjemdahl P, Ölund A, Berlin T, Hahn RG. Adrenaline, cyclic AMP and potassium during general anaesthesia with and without epidural anaesthesia. *Eur J Anaesth* 1995; 12: 487-494.
82. Olsson J, Hahn RG. Simulated intraperitoneal absorption of irrigating fluid. *Acta Obstet Gynecol Scand* 1995; 74: 707-713.
83. Drobin D, Hahn RG. Leukocytosis after fluid loading and induction of epidural anaesthesia. *J Anesth* 1995; 9: 235-238.
84. Zhang W, Andersson B, Hahn RG. Effect of irrigating fluids and prostatic tissue extracts on isolated cardiomyocytes. *Urology* 1995; 46: 821-824.
85. Ekengren J, Connor P, Lindholm M, Hahn RG. Fluid absorption during transurethral bladder surgery. *Scand J Urol Nephrol* 1995; 29: 519-520.
86. Norberg Å, Jones AW, Hahn RG. Pharmacokinetics of ethanol in arterial and venous blood and in end-expired breath during vasoconstriction and vasodilatation. *Am J Therapeut* 1995; 2: 954-961.
87. Hahn RG. Origin of intravascular fluid recruited by vasodilatation during epidural anaesthesia. *Eur Surg Res* 1996; 28: 70-74.
88. Hahn RG, Nilsson A, Farahmand B, Ekengren J, Persson P-G. Operative factors and the long-term risk of acute myocardial infarction after transurethral resection of the prostate. *Epidemiology* 1996; 6: 93-95.
89. Zhang WB, Ekengren J, Hahn RG. Large-sized bladders reduce intravesical pressure and fluid absorption during TURP using the suprapubic trocar. *Urol Int* 1996; 56: 28-32.
90. Olsson J, Hahn RG. Analysis of ethanol in expired air during low-flow isoflurane anaesthesia. *Br J Anaesth* 1996; 76: 85-89.
91. Zhang W, Hahn RG. "Double toxicity" of glycine solution in the mouse. *Br J Urol* 1996; 77: 203-206.
92. Nilsson A, Jogestrand T, Ekengren J, Hahn RG. Femoral vein blood flow during transurethral resection of the prostate. *Br J Urol* 1996; 77: 207-211.
93. Hahn RG, Nennesmo I, Rajs J, Sundelin B, Wroblewski R, Zhang W. Morphological and X-ray microanalytical changes in mammalian tissue after overhydration with irrigating fluids. *Eur Urol* 1996; 29: 355-361.
94. Nilsson A, Randmaa I, Hahn RG. Haemodynamic effects of irrigating fluids studied by Doppler ultrasonography in volunteers. *Br J Urol* 1996; 77: 541-546.
95. Hahn R, Olsson J, Englund K, Seppälä M. Serum levels of endometrial proteins during transcervical resection of the endometrium. *Br J Obstet Gynaecol* 1996; 103: 442-445.

96. Olsson J, Hahn RG. Survival after high-dose intravenous infusion of irrigating fluids in the mouse. *Urology* 1996; 47: 689-692.
97. Olsson J, Berglund L, Hahn RG. Irrigating fluid absorption from the intact uterus. *Br J Obstet Gynaecol* 1996; 103: 558-561.
98. Hahn RG, Nilsson A, Hjelmqvist H, Zhang W, Rundgren M. Renal function during intravenous infusion of urological irrigating fluids in the sheep. *Acta Anaesthesiol Scand* 1996; 40: 671-678.
99. Olsson J, Berglund L, Hahn RG. Early detection of the 'endometrial resection syndrome'. *Gynecol Obstet Invest* 1996; 103: 558-561.
100. Drobin D, Hahn RG. Time course of increased haemodilution in hypotension induced by extradural anaesthesia. *Br J Anaesth* 1996; 77: 223-226.
101. Hahn RG. Dextran 70 and the blood loss during transurethral resection of the prostate. *Acta Anaesthesiol Scand* 1996; 40: 820-824.
102. Ekengren J, Hahn RG. Complications during transurethral vaporization of the prostate. *Urology* 1996; 48: 424-427.
103. Hahn RG, Olsson J. Ethanol monitoring of the transurethral resection syndrome. *J Clin Anesth* 1996; 8: 652-655.
104. Hahn RG. Total fluid balance during transurethral resection of the prostate. *Int Urol Nephrol* 1996; 28: 665-671.
105. Hahn RG, Zhang W, Rajs J. Pathology of the heart after overhydration with glycine solution in the mouse. *APMIS* 1996;104: 915-920.
106. Ståhle L, Nilsson A, Hahn RG. Modelling the volume of expandable body fluid spaces during i.v. fluid therapy. *Br J Anaesth* 1997; 78: 138-143.
107. Hahn RG, Drobin D, Ståhle L. Volume kinetics of Ringer's solution in female volunteers. *Br J Anaesth* 1997; 78: 144-148.
108. Hahn RG. Estimation of fluid absorption by using the area under the curve for ethanol in expired air. *Urol Int* 1997; 58: 25-29.
109. Hahn RG, Nilsson A, Farahmand BY, Persson P-G. Blood haemoglobin and the long-term incidence of acute myocardial infarction after transurethral resection of the prostate. *Eur Urol* 1997; 31: 199-203.
110. Hahn RG, Shemais H, Essén P. Glycine 1.0% versus glycine 1.5% as irrigating fluid during transurethral resection of the prostate. *Br J Urol* 1997; 79: 394-400.
111. Olsson J, Sandfeldt L, Hahn RG. Survival after high-dose intraperitoneal infusion of glycine solution in the mouse. *Scand J Urol Nephrol* 1997; 31: 119-121.
112. Hahn RG, Riddez L, Brismar B, Strandberg Å, Hedenstierna G. Haemodynamics during inhalation of a 50% nitrous-oxide-in-oxygen mixture with and without hypovolaemia. *Acta Anaesthesiol Scand* 1997; 41: 485-491.
113. Riddez L, Hahn RG, Brismar B, Strandberg Å, Svensén C, Hedenstierna G. Central and regional hemodynamics during acute hypovolemia and volume substitution in volunteers. *Crit Care Med* 1997; 25: 635-640.
114. Hahn RG. Dilutional hypocalcaemia from urological irrigating fluids. *Int Urol Nephrol* 1997; 29: 201-206.
115. Hahn RG. Trapping of electrolytes during fluid absorption in transurethral resection of the prostate. *Scand J Urol Nephrol* 1997; 31: 259-263.

116. Pettersson N, Perbeck L, Brismar B, Hahn RG. Sensory and sympathetic block during interpleural analgesia. *Region Anesth* 1997; 22: 313-317.
117. Hahn RG, Svensén C. Plasma dilution and the rate of infusion of Ringer's solution. *Br J Anaesth* 1997; 79: 64-67.
118. Hahn RG, Norberg Å, Jones AW. "Over-shoot" of ethanol in the blood after drinking on an empty stomach. *Alcohol & Alcohol* 1997; 32: 501-505.
119. Svensén C, Hahn RG. Volume kinetics of Ringer solution, dextran 70 and hypertonic saline in male volunteers. *Anesthesiology* 1997; 87: 204-212.
120. Hahn RG, Nilsson A. Cardiac output and ethanol monitoring of fluid absorption. *Eur J Anaesth* 1997; 14: 406-411.
121. Trygg G, Pousette Å, Ekengren J, Hahn RG. Free and total prostate-specific antigen serum concentrations do not help to detect prostate cancer in patients with urinary outlet obstruction. *Br J Urol* 1997; 80: 618-622.
122. Jones AW, Norberg Å, Hahn RG. Concentration-time profiles of ethanol in arterial and venous blood and end-expired breath during and after intravenous infusion. *J Forensic Sci* 1997; 42: 1088-1094.
123. Jones AW, Hahn RG. Pharmacokinetics of ethanol in patients with renal failure before and after hemodialysis. *Forens Sci Int* 1997; 90: 175-183.
124. Svensén C, Hjelmqvist H, Hahn RG. Volume kinetics of Ringer solution during endotoxemia in conscious rabbits. *J Endotoxin Res* 1997; 4: 425-430.
125. Hahn RG, Drobin D. Urinary excretion as an input variable in volume kinetic analysis of Ringer's solution. *Br J Anaesth* 1998; 80: 183-188.
126. Pettersson N, Emanuelsson B-M, Reventlid H, Hahn RG. High-dose ropivacaine wound infiltration for pain relief after inguinal hernia repair. A clinical and pharmacokinetic evaluation. *Region Anesth Pain Med* 1998; 23: 189-196.
127. Riddez L, Johnson L, Hahn RG. Central and regional hemodynamics during fluid therapy after uncontrolled intra-abdominal bleeding. *J Trauma* 1998; 44: 433-439.
128. Trygg G, Ekengren J, Farahmand B, Persson P-G, Hahn RG. Operative course of transurethral resection of the prostate and progression of prostate cancer. *Urol Int* 1998; 60: 169-174.
129. Hahn RG, Resby M. Volume kinetics of Ringer's solution and dextran 3% during induction of spinal anaesthesia for Caesarean section. *Can J Anaesth* 1998; 45: 443-451.
130. Hahn RG. Volume effect of Ringer's solution in the blood during general anaesthesia. *Eur J Anaesthesiol* 1998; 15: 427-432.
131. Hahn RG, Sandfeldt L, Nyman CR. Double-blind randomized study of symptoms associated with absorption of glycine 1.5% or mannitol 3% during transurethral resection of the prostate. *J Urol* 1998; 160: 397-401.
132. Riddez L, Hahn RG, Suneson A, Hjelmqvist H. Central and regional hemodynamics during uncontrolled bleeding using hypertonic saline dextran for resuscitation. *Shock* 1998; 10: 176-181.
133. Steffensen AJ, Hahn RG. Fluid absorption and the long-term outcome after transcervical resection of the endometrium. *Acta Obstet Gynaecol Scand* 1998; 77: 863-868.
134. Ewaldsson C-A, Hahn RG. β_2 -adrenergic responsiveness *in vivo* during abdominal surgery. *Br J Anaesth* 1998; 81: 343-347.

135. Drobin D, Hahn RG. Volume kinetics of Ringer's solution in hypovolemic volunteers. *Anesthesiology* 1999; 90: 81-91.
136. Olsson J, Hahn RG. Glycine toxicity after high-dose i.v. infusion of glycine 1.5% in the mouse. *Br J Anaesth* 1999; 82: 250-254.
137. Riddez L, Johnson L, Hahn RG. Early hemodynamic changes during uncontrolled intra-abdominal bleeding. *Eur Surg Res* 1999; 31: 19-25.
138. Hahn RG, Nilsson A, Ståhle L. Distribution and elimination of the solute and water components of urological irrigating fluids. *Scand J Urol Nephrol* 1999; 33: 35-41.
139. Svensén C, Ponzer S, Hahn RG. Volume kinetics of Ringer solution after surgery for hip fracture. *Can J Anaesth* 1999; 46: 133-141.
140. Svensén C, Drobin D, Olsson J, Hahn RG. Stability of the interstitial matrix after crystalloid fluid loading studied by volume kinetic analysis. *Br J Anaesth* 1999; 82: 496-502.
141. Riddez L, Hjelmqvist H, Suneson A, Hahn RG. Short-term crystalloid fluid resuscitation in uncontrolled intra-abdominal bleeding in swine. *Prehosp & Disaster Med* 1999; 14: 87-92.
142. Hahn RG, Sandfeldt L. Blood ammonia levels after intravenous infusion of glycine with and without ethanol. *Scand J Urol Nephrol* 1999; 33: 222-227.
143. Sandfeldt L, Hahn RG. Comparison of urological irrigating fluids containing glycine and mannitol in volunteers. *The Prostate* 1999; 41: 89-98.
144. Iversen M, Hahn RG. Acute effects of vitamin A on the kinetics of endotoxin in conscious rabbits. *Intens Care Med* 1999; 25: 1160-1164.
145. Pettersson N, Berggren P, Westman B, Larsson M, Hahn RG. Pain relief by wound infiltration of bupivacaine or high-dose ropivacaine after inguinal hernia repair. *Region Anesth Pain Med* 1999; 24: 569-575.
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