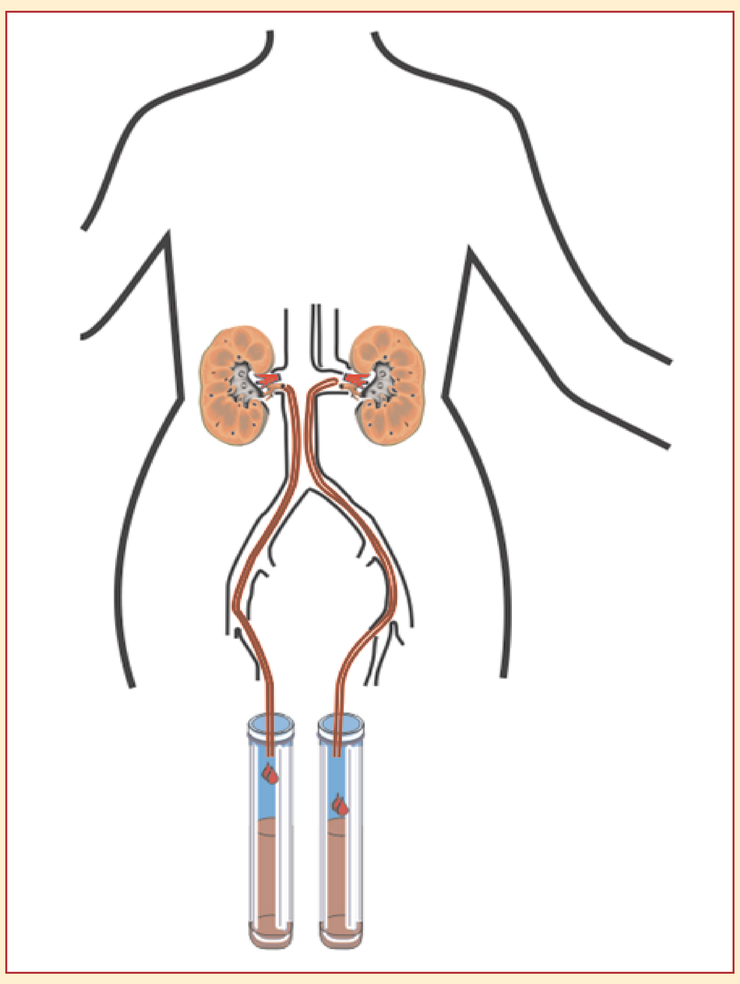
Acid-Base Balance of Renal Venous Blood in Patients with Secondary Hypertension

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In accessible literature we didn't reveal the data of state Acid-Base Balance (ABB) in Renal Venous Blood (RVB).

During study of differential diagnostic arterial hypertension, plasma Renin activity and other renal hormones we have simultaneously investigated ABB of RVB in patients with secondary hypertension.



THE AIM

of this study was to explore the level of renal ischemia in patients with different lesions of kidneys and renal artery accompanied with arterial hypertension by determination of ABB in RVB.

44 patients with different kind of renal artery lesions (RAL), small kidney (SK) and 18 with polycystic kidney disease (PKD) have been studied by measuring pO_2, SO_2%, pCO_2, pH, BE, BB, HCO_3,

ESSENTIAL RESULTS OF THE RESEARCH ARE AS FOLLOWING:



Abdominal aorte (of RAL)

pO_2 - 96,4±5,9
SO_2% - 97,2±0,37
pCO_2 - 32,99±1,09
pH - 7,37±0,01
BE - 39,8±0,88
BB - 42,04±1,3
HCO_3 - 21,5±0,9
TCO_2 - 22,6±0,9

RVB of RAL

pO_2 - 62,5±4,3
SO_2% - 90,1+1,8
pCO_2 - 35,11±0,96
pH - 7,39±0,01
BE - 31,6±1,06
BB - 42,1±1,07
HCO_3 - 22,3±0,9
TCO_2 - 23,3±0,9

RVB of RAL on a opposite side

pO_2 - 65,0±3,4
SO_2% - 91,2±0,95
pCO_2 - 34,95±0,72
pH - 7,38±0,01
BE - 29,7±1,06
BB - 41,9±1,1
HCO_3 - 22,1±1,06
TCO_2 - 23,08±1,07



Abdominal aorte (of SK)

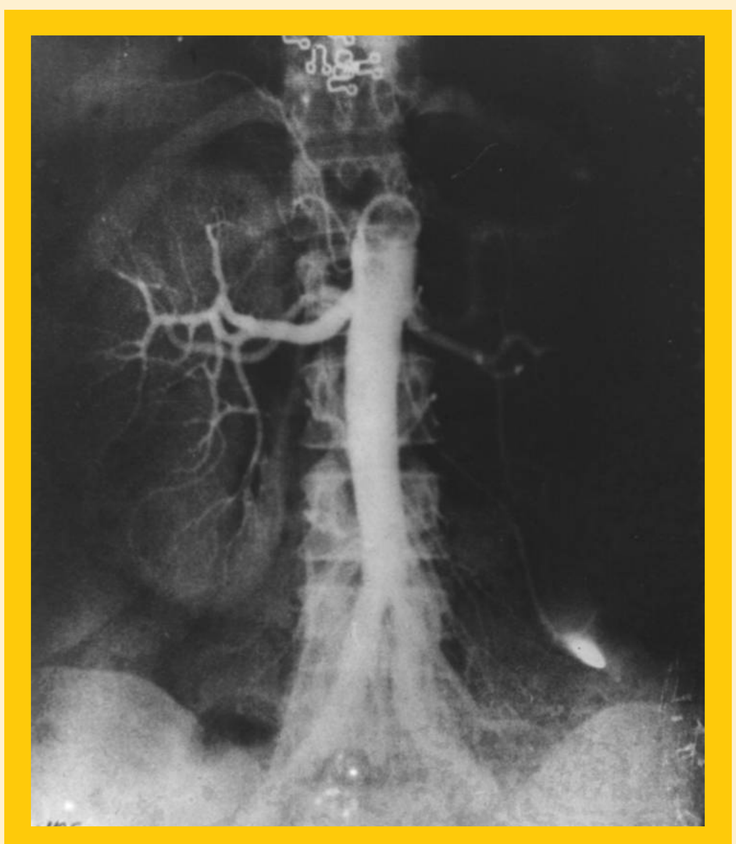
pO_2 - 103,2±6,4
SO_2% - 97,2±0,8
pCO_2 - 37,7±2,53
pH - 7,35±0,3
BE - 42,5±1,7
BB - 40,7±1,7
HCO_3 - 20,8±1,2
TCO_2 - 21,8±1,5

RVB of SK

pO_2 - 70,4±4,9
SO_2% - 91,8±0,8
pCO_2 - 39,2± 1,99
pH - 7,35±0,03
BE - 37,6±0,03
BB - 41,3±1,4
HCO_3 - 21,6±0,9
TCO_2 - 22,7+0,7

RVB of SK on a opposite side

pO_2 - 81,6±6,4
SO_2% - 95,0±1,3
pCO_2 - 34,95±0,72
pH - 7,35±0,03
BE - 41,4±1,46
BB - 40,6±1,7
HCO_3 - 20,8±1,6
TCO_2 - 21,8±1,7



Abdominal aorte (of PKD)

pO_2 - 102,0±11,5
SO_2% - 97,7±1,08
pCO_2 - 33,62±2,35
pH - 7,38±0,01
BE - 49,6±1,15
BB - 40,3±1,1
HCO_3 - 20,2±1,08
TCO_2 - 20,5±1,2

RVB of PKD right side

pO_2 - 57,9±2,8
SO_2% - 89,2±2,5
pCO_2 - 33,7±1,51
pH - 7,38±0,03
BE - 43,3±0,92
BB - 40,9±0,9
HCO_3 - 21,01±0,9
TCO_2 - 21,0±1,04

RVB of PKD left side

pO_2 - 59,4±3,8
SO_2% - 90,2±1,9
pCO_2 - 32,63±1,71
pH - 7,38±0,02
BE - 41±1,27
BB - 41,9±1,1
HCO_3-21,7±0,9
TCO_2 -21,5±1,03

CONCLUSION:

The obtained results have shown that the essential data in ABB in RVB in patients with secondary hypertension are very stable and there is only a statistically not significant difference between lesions and opposite side RVB in RAL and SK.

Furthermore, only in patients with PKD, levels of pO_2 and pCO_2 in RVB are statistically lower than other groups. Remaining data of ABB in patients with secondary hypertension are essentially no different to normal levels and confirm stable ABH in RVB patients even with PKD.