

respiratory or gastrointestinal infections, aggravated by dehydration and acid-base imbalance, as well as anorexia in most of the patients. Thus, abnormalities in renal functions can be expected. This may actually have been the case in previous reports because

Table 3. Maximum hydrogen ion excretion ($\text{Eq H}^+/\text{min}/1.73 \text{ m}^2$)

	Marasmus	Kwashiorkor	Controls
	69.1	191.1	90.3
	76.5	228.8	105.0
	106.1	134.1	127.5
	137.6	82.2	87.4
	62.4	82.8	99.2
	101.6	94.3	
	293.6	106.0	
	110.5		
Median	103.9	106.0	99.2
Range	231.2	146.6	40.1

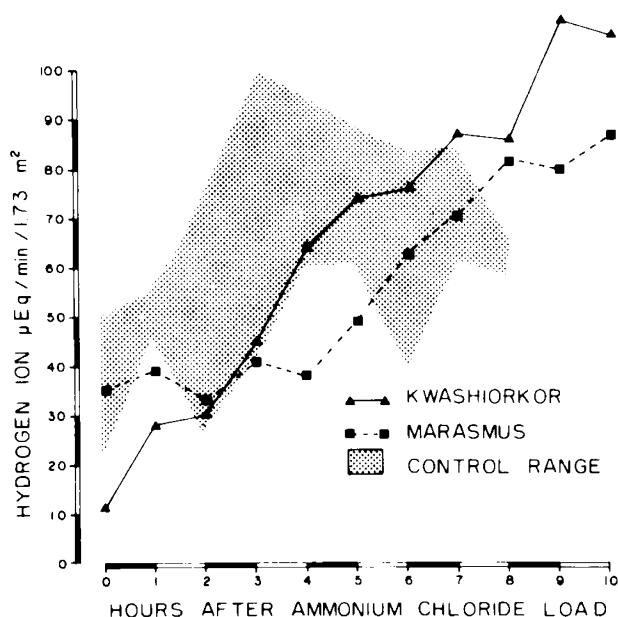


Fig. 1. Hydrogen ion excretion (median values) after ammonium chloride load. Shaded area, normal ranges.

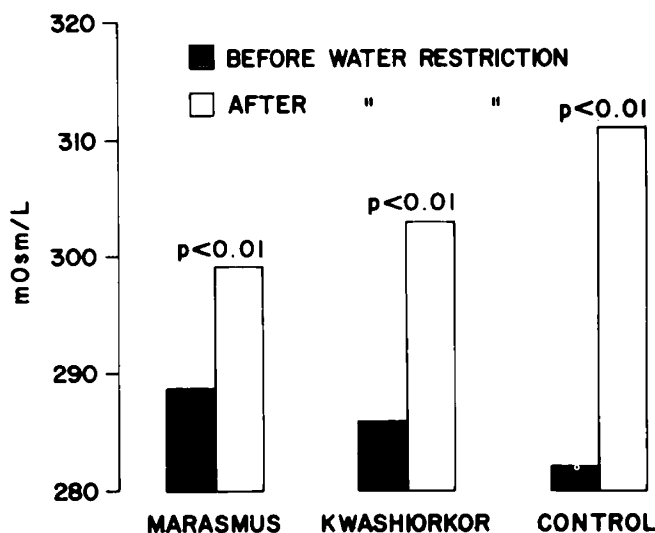


Fig. 2. Serum osmolality during water restriction. Median values for each group.

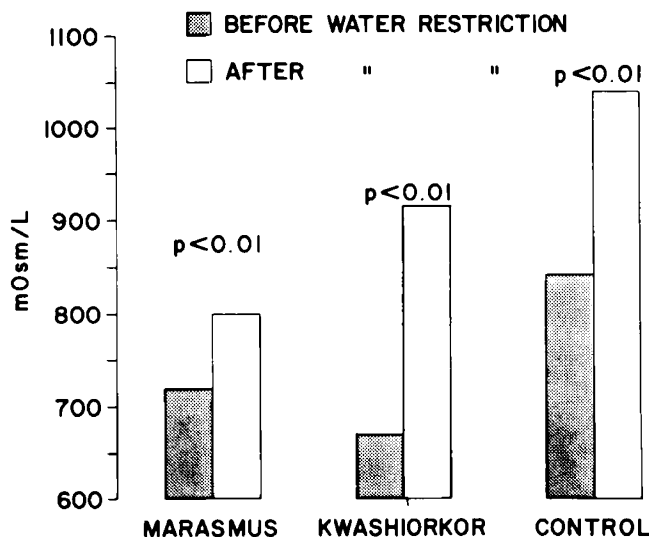


Fig. 3. Urine osmolality during water restriction. Median values for each group.

Table 4. Maximum urine concentrating capacity (mOsm/liter)

	Marasmus	Kwashiorkor	Controls
	910	952	1042
	558 ¹	1060	904
	913	924	1050
	848	849	1039
	740	797	981
	1013	893	
	550 ¹	979	
	840		
Median	844	924	1039
Range	463	263	146

¹ Low values.

the clinical status, particularly regarding infectious complications of malnutrition, is not always clearly stated.

Our subjects had completely recovered from any acute electrolyte disorders and were free of clinically obvious infections throughout the study. An improvement of their nutritional status cannot be expected in such a short time with the realimentation procedures used.

In previous reports on deficient renal function in severely malnourished subjects, the findings have been variously explained. Thus, a low cardiac output causing renal hemodynamic changes (1, 2, 9), depletion of intracellular electrolytes (11, 15), as well as a decreased kidney size (14) have all been postulated. Inasmuch as none of these factors is necessarily present in all cases of severe malnutrition (4, 7, 9, 17), their simultaneousness or their coexistence with moderate or severe diarrheal dehydration may have been the cause of the discrepant findings in other series.

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