

PASD - PROGRAM FOR ANALYSIS AND AUTOMATIC HEART SHUNT DIAGNOSTIC

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For the study of the heart's shunts technique of radioisotope angiography (RIA) has been recently developed¹⁾. In this technique gamma - scintillation camera is used for observation of radioisotope gamma-emitter flow through the heart's vessels.

The study of activity vs. time dependance for different "region of interest" (parts of the heart) reveals data necessary for diagnosis of heart's shunts.

For the objective analysis of activity vs. time graphs we have developed the PASD - computer program, which is using the original dilution curve function.

By applying the PASD-program in 12 cases we obtained results which are in good agreement with catheterisation data (Table).

It is shown in this way that mathematical analysis of heart's shunts is possible and useful application of the RIA method, which has some important advantages over the old-methods.

	RIA method plus program PASD		Catheterisation of the heart	
	Diagnosis	Q_p/Q_s	Diagnosis	Q_p/Q_s
1	L-D (KSD)	1.37/1	L-D (KSD)	1.5/1
2	L-D (KSD)	1.78/1	L-D (KSD)	1.9/1
3	L-D (KSD)	1.48/1	L-D (KSD)	1.6/1
4	L-D (KSD)	1.45/1	L-D (KSD)	1.5/1
5	L-D (PSD)	1.78/1	L-D (PSD)	2.3/1
6*	L-D (PSD)	2.59/1	L-D (PSD)	2.5/1
7*	L-D (PSD)	2.65/1	L-D (PSD)	2.5/1
8	D-L	0.52/1	D-L	0.6/1
9	D-L	0.49/1	D-L	0.5/1
10	L-D; D-L	1.42/1; 0.27/1	D-L	0.6/1
11	Normal heart		Normal heart	
12	Normal heart		Normal heart	

References:

1. Bošnjaković, V.B., et al. Journ. Nucl.Med. 14, 514, 1973.
2. Milinković Lj., IBK-1382 (1976), and the references there are in.