Safe transition from Selexipag to Treprostinil in Patients with Pulmonary Arterial Hypertension at Vilnius Pulmonary Hypertension Competence center

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OBJECTIVES/BACKGROUND

Pulmonary arterial hypertension (PAH) patient with insufficient response to maximized oral triple combination therapy might need transition to parenteral prostacyclin. There are no guidelines describing on how switch from oral selexipag to subcutaneous treprostinil should be performed. We present Vilnius Pulmonary Hypertension Competence centre's experience on transition from oral selexipag to subcutaneous treprostinil in patients with PAH.

METHODS

A retrospective analysis of our hospital PAH database was performed. Adult patients (age >18 years) with the diagnosis of PAH, who underwent switch from selexipag to treprostinil were included. Baseline demographic, clinical, functional characteristics and clinical outcomes were collected.

RESULTS

No	Age	Gender	Diagnosis	Targeted medication before	Reached dose of treprostinil (ng/kg/min)	Duration of treprostinil therapy (months)	Patient still alive
I	46	Female	IPAH	Bozentan 250 mg, Sildenafil 60 mg, Selexipag 2400 mcg	51.1	15	Yes
II	34	Male	PAH – CHD (ES with complex CHD)	Ambrisentan 10 mg, Sildenafil 60 mg, Selexipag 2800 mcg	26.6	3.5	No
III	31	Male	PAH – CHD (ES with complex CHD)	Bozentan 250 mg, Sildenafil 60 mg, Selexipag 1600 mcg	36.1	13	No

During 3 years period three of 17 patients were switched from oral to subcutaneous prostacyclin therapy, as triple oral combination therapy was considered insufficient. The selexipag was gradually discontinued while subcutaneous treprostinil was titrated up. We present the treprostinil titration schemes used in our center. During 1-14 months period transition from selexipag to treprostinil improved 6-MWT distance in 2 patients and decreased BNP levels in all patients.

Patient I, weight 81 kg	Treprostinil	Selexipag	BNP, 6MWT
Date	Dose, ng/kg/min	Dose, mcg	ng/L; m
1st day	1.25	1200 x 2	-
2nd day morning	2.5	1200	-
2nd day evening	3.75	900	
3rd day morning	5.25	900	-
3rd day evening	6.75	600	
4th day morning	8.25	600	-
4th day evening	9.75	400	
5th day morning	13.5	200	-
5th day evening	15.0	200	
6th day morning	16.5	200	-
6th day evening	18.0	-	
7th day morning	19.5	-	-
7th day evening	20.0		
8th day	20.0	-	63.5 ng/L
15th day	20.8	-	-
1 month	22.4	-	-
2 months	30.5	-	-
5 months	37.5	-	483 m
10 months	38.3	-	50.5 ng/L
14 months	51.1	-	-

Patient II, weight 85 kg	Treprostinil	Selexipag	BNP, 6MWT
Date	Dose, ng/kg/min	Dose, mcg	-
1st day	1.25	1400 x 2	-
2nd day morning	2.5	1400	1021.1 ng/L
2nd day evening	5.0	1200	
3rd day morning	7.5	1000	-
3rd day evening	9.0	700	
4th day morning	10.5	700	-
4th day evening	12.0	400	
5th day morning	13.5	200	-
5th day evening	15.0	200	
6th day morning	16.5	200	-
6th day evening	18.0	-	
7th day morning	19.5	-	-
7th day evening	20.0	-	
8th day	20.0	-	-
14th day	20.6	-	1051.8 ng/L
27th day	22.2	-	961.6 ng/L
63rd day	24.0	-	-
79th day	24.0	-	1484.2 ng/L
82nd day	24.0	-	1151.3 ng/L
92nd day	26.6	-	-
107th day - sudden death	26.6	-	-

Patient III, weight 68 kg	Treprostinil	Selexipag	BNP, 6MWT
Date	Dose, ng/kg/min	Dose, mcg	ng/L; m
1st day	1.25	800 x 2	-
2nd day	2.5	600 x 2	-
3rd day	3.75	400 x 2	-
4th day	5	200 x 2	-
5th day	6	-	-
6th day	7.2	-	-
7th day	8	-	-
8th day	9.5	-	-
9th day	9.5	-	-
10th day	9.5	-	310 m
11th day	10.7	-	-
12th day	10.7	-	-
13th day	10.7	-	-
14th day	11.0	-	-
15th day	11.2	-	-
16th day	11.4	-	-
17th day	11.4	-	-
18th day	11.7	-	-
19th day	11.9	-	-
20th day	12.2	-	-
21st day	12.2	-	-
1 month	12.9	-	-
1.5 months	13.5	-	339.1 ng/L
2 month	14.7	-	-
2.5 months	15.3	-	-
3 months	15.9	-	-
6 months	22.0	-	308.4 ng/L; 480 m
7 months	24.9	-	-
9 months	24.9	-	295.3 ng/L 217.7 ng/L
12 months	36.1	-	1003.6 ng/L
13 months – death	36.1	-	1307.8 ng/L

CONCLUSIONS

This report describes a beneficial transition from oral selexipag to subcutaneous treprostinil in patients with PAH, when oral triple combination therapy is insufficient. The prospective larger sample size studies and long-term follow-up would be helpful to determine how to guide this transition.