

**Abstract Type : Poster**

**Abstract Submission No. : PO-1012**

**GOLD-X Case Report: Physical Capacities Improvement on Indonesian Elite Master Swimmer with Hypertension, Coronary Heart Disease and Others.**

**Alvin Wiharja<sup>1</sup>**, Nora Sutarina<sup>2</sup>

<sup>1</sup>Department of Sports Medicine, Svarga e-Motion Sanctuary, Indonesia

<sup>2</sup>Department of Sports Medicine, Universitas Indonesia, Indonesia

**Case Study:** GOLD-X is Geriatric Optimal Lifestyle Development on eXercise, a pilot program designated on sports medicine perspective to help controlling predisposition factor on susceptible elderly. Improving physical capacities on athlete are important but it is more important to control life-threatening risk factor, such as hypertension. Through the precise lifestyle development, both targets are reached.

**Method**

The sports medicine monitoring program was conducted on Female Indonesian Elite Master Swimmer for 8 weeks in intensive preparation for international swimming event. It applied on medical, physical activity and also exercises prescription to control the risk factors for hypertension, cardiovascular disease, rhomboid strain injury, obesity, dyslipidemia, and risk of fall, poor strength and flexibility. Health fitness parameters (BMI, Handgrip test, plank test, scratch test and 6-Minutes Walking Test) are examined at the beginning and end of the exercise period to measure the progress of physical capacities.

**Result**

Patient optimized the exercise program during two months periodization. The intensity of the exercise was done at moderate level. Blood pressure and heart rate was controlled in every supervised exercise (mean 134/74 mmHg(SD±7,43/±4.84) and 60 bpm(SD±4.76)). Body Mass Index was decreased from 32.3 kg/m<sup>2</sup>to 30.9 kg/m<sup>2</sup>. Handgrip strength improved 3 kg for right-side and 0.5 kg for left-side. Muscle endurance improved from 92 seconds to 147 seconds on plank test. Flexibility stayed at the same level and become equals for both side. Cardiorespiratory endurance improved, based on distance reached in 6-MWT, from 548,1 meters to 620 meters. Subjectively and objectively no clinical symptoms, led to repeating cardiovascular and complication of hypertension events, were found. In additional, patient broke her personal best time and received 4 gold medals in various categories.

**Conclusion**

All physical capacities improved clinically within two months sports medicine intervention. Thus improvement on patient's sports performance with no life-threatening event was found.

Figure and Table

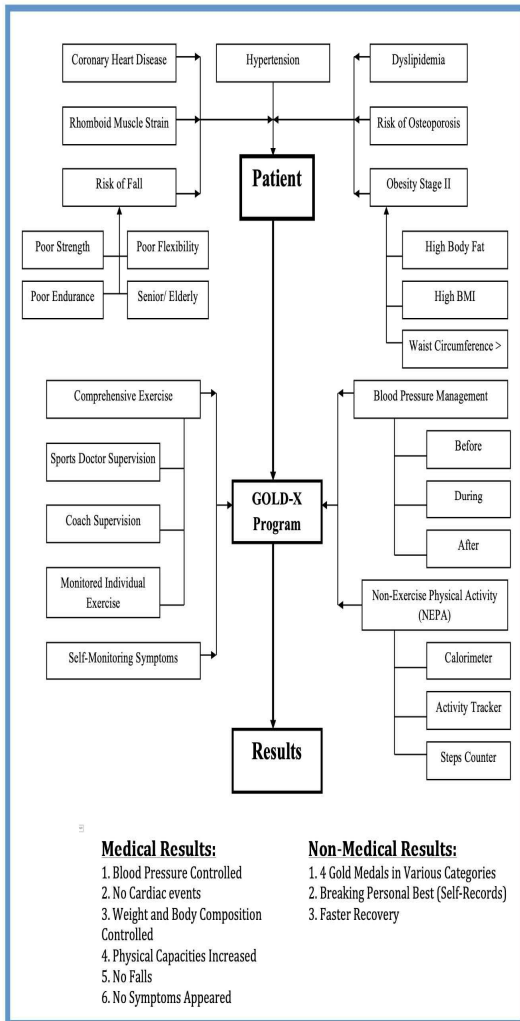


Figure 1. GOLD-X application and mechanism on patient.

Table 1. Physical Capacities Progress During Intervention

Parameters	Methods	Before Intervention	After Intervention	Interpretation	
Body Composition	Body Mass Index	32.3kg/m <sup>2</sup>	30.9kg/m <sup>2</sup>	Improved 1.37kg/m <sup>2</sup>	
	Fat Percentage	41.5%	39.7%	Improved 1.8%	
Flexibility	Scratch Test	Right-side	25cm	22cm	Improved to equals value from right-side and left-side.
		Left-side	19cm	23cm	
Muscle Strength	Handgrip Test	Right-side	25kg	28kg	Improved 3kg for right-side and 0.5kg for left-side.
Left-side	22.5kg	23kg			
Muscle Endurance	Plank Test	92 seconds	147 seconds	Improved 55 seconds	
Cardiorespiratory Endurance	6-Minutes Walking Test	548.1meters	620meters	Improved 71.9 meters in distance	

Figure 2. Heart Rate Monitoring during Exercise.

