Treatment of ovarian hemorrhage can be conservative or surgical. Initial treatment is to control the bleeding medically. Surgical treatment is offered in case of deterioration of the vital status despite sustained medical therapy (4).

Keeping the anticoagulant intensity within the optimal therapeutic range and ovulation suppression are main targets for follow-up management. Patients should be advised to remain loyal to their cardiology visit for former. In our report, eight of ten women whose INR values were at out of optimal anticoagulation intensity did not visit their cardiologist over one year.

Low dose oral contraceptive pill (OC), progesterone-only agents, gonadotropin-releasing hormone analogs are different options for ovulation suppression (4, 5). There has been a discrepancy about relation between OC treatment and thrombotic risk (2, 4, 5). DMPA- including only injectable progesterone- is an effective contraceptive agent, neither increases hepatic production of coagulation factors and blood pressure, nor causes any significant changes in most of the coagulation parameters (4). Therefore, DMPA has been recommended in patients having contraindications in use of OC (4, 5). However, some studies concluded that long-term use of DMPA was associated with impaired endothelial function and lipid profile (4).

DMPA seems to be quite safer than OCs for women under life-long anticoagulant therapy. Further prospective randomized studies are needed to evaluate the safety and efficacy of DMPA and OC in preventing hemorrhagic corpus luteum.

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The effects of flight on the electrocardiogram

Uçuşun elektrokardiyogram üzerindeki etkileri

In military aviation, jet pilots are exposed to flight stress than helicopter pilot. The respiratory rate and heart rate are susceptible to increases in changes in the atmospheric pressure and the G force in the jet pilots. The helicopter pilots are not exposed to the G force because they fly below 15.000 feet; but, unlike jet pilots, they are subjected to extreme vibration. Even though supplemental oxygen is not needed and the cabin pressure is not regulated, helicopter pilots still have to deal with the effect of high altitude (1).

We aimed to assess the effect of high altitude, low atmospheric pressure, acceleration, duration of flight and differences of flight conditions on the electrocardiograms (ECG) of jet and helicopter pilots. We included 71 jet and 167 helicopter pilots who presented to the Merzifon military hospital for annual check-up. The control group was composed of 93 individuals who were not pilots and were from the same geographic region. All of the subjects were healthy males with no cardiovascular problems. Even though it is known that hypoxia has effects on the ECG, there are no studies that evaluated the ECG parameters in the jet and helicopter pilots

The ECG findings of the subjects are shown in Table 1. The basal heart rate was the lowest in jet pilots; the helicopter pilots had the second lowest levels. The PR interval was significantly longer in the jet pilots than the control group. The QT duration was significantly longer in the control group than the pilots group. On the other hand, the QRS duration was longer in the pilots group. Even though the QRS axis was greater in both pilots group, it was significantly different in the helicopter pilots of the control group. The amplitude of the P-wave was the highest in the helicopter pilot group and it was significantly different from the control group. The helicopter and the jet pilots groups had significantly shorter Pmax and Pmin durations compared to the control group. However, there was no significant difference in the P wave and QRS dispersions among the groups and no correlation was found between the flight durations and ECG findings.

First-degree atrioventricular block can be detected in healthy pilots and it is related to the increased resting vagal tone. Resting heart rate was lower in the jet and helicopter pilots as a result of the regular physical activity. QRS durations and PR intervals were longer in the jet and helicopter pilots. We concluded that this could be a result of lengthening of the atrioventricular conduction duration and ventricular depolarization by means of an increased resting vagal tone.

The echocardiographic parameters of pilots were normal in our study. The most important limitation of our study is manual calculation of P-wave and QT measurements by using a magnifying lens instead of a computer-assisted P-wave calculation.

Increased P wave dispersion predicts the development of atrial fibrillation in patients with various heart diseases (2-4). The QT dispersion reflects the physiological variability of regional ventricular repolarization. Increased QT dispersion was related to heterogeneity of regional ventricular repolarization and is accepted as a marker for arrhythmia and sudden death (5).

There are no significant changes in the P wave and QT dispersions in the jet and helicopter pilots. Therefore, the risk of atrial and ventricular arrhythmias is expected to be similar to the normal population. These ECG changes can potentially be attributed to the regular physical activity and the effects of long-term flight exposure.

Table 1. Electrocardiographic features in the groups

Variables	Control group (n=93)	Jet pilots group (n=71)	Helicopter pilots group (n=167)	p	p1	p2	p3
Harte rate, bpm	75.1±13.1	66±10.8	66.8±10.8	<0.001	<0.001	<0.001	0.87
QT, ms	402.9±18.4	393.6±22.1	392.1±22	<0.001	0.015	<0.001	0.87
PR, ms	145.5±19.4	154.8±18.6	149.4±20.4	0.01	0.009	0.29	0.13
QRS, ms	88.6±10.5	100,2±10.3	99.0±10.7	<0.001	<0.001	<0.001	0.69
QRS axis degree	43.2±31.5	52.1±39.1	55.1±28.8	0.02	0.18	0.01	0.79
Voltage V5R, mv	1.4±0.5	1.5±0.5	1.4±0.4	0.18	0.21	0.97	0.22
Voltage V1S, mv	0.7±0.1	0.8±0.3	0.9±0.4	0.002	0.29	0.002	0.28
P-wave amplitude, mv	0.13±0.03	0.13±0.03	0.14±0.03	0.24	0.94	0.035	0.32
P maximum, ms	95.3±10.8	86.6±9.4	87.8±10.4	<0.001	<0.001	<0.001	0.69
P minimum, ms	66.9±9.8	60.2±8.5	59.7±8.65	<0.001	<0.001	<0.001	0.90
Pwd, ms	28.4±7.5	26.18±7.6	27.8±7.6	0.17	0.17	0.86	0.28
QTcd, ms	27.9±5.6	29.2±5.8	28.9±5.8	0.31	0.33	0.41	0.91
Incomplete RBB, n	4 (4.13)	10 (14.1)	10 (6)	0.04			

Data are given as mean±SD or as n (%) - P1 - Comparison of variables between the control and jet pilot groups,
P2 - Comparison of variables between the control and helicopter pilots group, P3 - Comparison of variables between the jet and helicopter pilots groups
Pwd - P - wave dispersion, QTcd - corrected QT dispersion

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Percutaneous pulmonary valve implantation; first experiences from Turkey

Perkütan pulmoner kapak implantasyonu; Türkiye'den ilk deneyimler

Since many years, conduits have been used by surgeons in the treatment of certain congenital heart diseases. However all conduits become dysfunctional by the time and should be replaced (1). Percutaneous pulmonary valve implantation (PPVI) is an alternative treatment option to surgery (2, 3). In this article, we aimed to present early and short term results of PPVI from our center.

There were 10 implantations performed since October 2010 to June 2012. Eight of the patients were males and two were female, aged between 13 and 39 years (19.2±7.8 years), and weighed between 32 and 76 kg (58.2±14.1kg). Informed consent form was obtained from all patients before procedure. Patients' diagnoses were within a wide spectrum, including tetralogy of Fallot to corrected transposition of great arteries. Different types of conduit were used in order to establish right ventricle to pulmonary artery continuity, including; Freestyle conduit, in three patients; Gore-tex conduit were used in two patients; a Contegra conduit was used in one patient; a Hemashield, Xenograft and pulmonary homograft were used in the others. A native pulmonary valve was present in one of the patients. Conduit dysfunction was defined as pulmonary regurgitation more than mild with/without stenosis (4). Two of the patients who underwent PPVI had significant pulmonary insufficiency, while the remaining eight had both insufficiency and obstruction.

Edwards Sapien transcatheter heart valves (Edwards Lifesciences LLC, IrvineCalifornia) were used in seven of the patients, while Melody valves (Medtronic, Inc., Minneapolis, Minnesota) were used in the remaining three for implantation. The selection of the implanted valve type was based upon the conduit size and the lesion type.

Right ventricular (RV) pressure evidently decreased in all patients having had high RV pressure before procedure, except in one patient who had pulmonary hypertension. The RV pressure value and RV/aorta pressure ratio