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Dopis redakci | Letter to the Editor

ST segment depression in the inferior leads in Brugada Pattern: It's time to look for it

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The ECG represents, today, the only method in order to diagnose Brugada Syndrome (BS). The last Consensus Statement on Inherited Primary Arrhythmia Syndromes published in 2013 has updated the diagnostic criteria. BS could be diagnosed in patients with ST segment elevation with type 1 morphology ≥2 mm in ≥1 lead among the right precordial leads V1, V2 positioned in the second, third and fourth intercostal spaces (ics) occurring either spontaneously or after provocative drug test [1]. Thus, a standard 12-lead ECG could fail in BS diagnosis. Right precordial leads placed at the 4th ics could show slight ST segment abnormalities or nothing at all and the typical ECG signs could be present only in the high ics (the 3rd and the 2nd) [2]. Recently our group highlighted the role of limb leads in this specific situation. In our population of 87 patients (78 males, 41 ± 12 years) with spontaneous type 1, 41 of them (47%) showed an ascending ST segment depression in the inferior leads (≥0.1 mV in voltage, ≥0.08 s in duration) [3]. It is worth of noting that among 21 patients with the diagnostic pattern only at the 3rd and 2nd ics, 10 (48%) showed this sign. Thus, the ascending ST segment depression in the inferior leads represents the only light in order to suspect Brugada Pattern (BP). The ECG in Fig. 1 shows a typical example about the role of limb leads analysis in BP diagnosis. The ST segment depression in the inferior leads represents the mirror image of the ST segment elevation appearing in the right precordial leads. In fact, flipping (rotating upside down) and analyzing backlight (the observer should see the opposite side of the ECG paper) the ECG, the inferior leads appears very similar to the typical ECG sign recorded in the upper right precordial leads (Fig. 1). In cases with no clear BP evidence in the conventional right precordial leads, ST depression in the inferior leads can be helpful in suspecting BP, suggesting the need for precordial electrodes displacement 1 or 2 spaces above.

Conclusions

During a standard 12 lead ECG careful analysis of inferior leads should be performed searching an ascending ST segment depression in the inferior leads (≥0.1 mV in voltage, ≥0.08 s in duration). This sign could be associated with a type 1 BP recognizable only with V1 and V2 placed at the high intercostal spaces.

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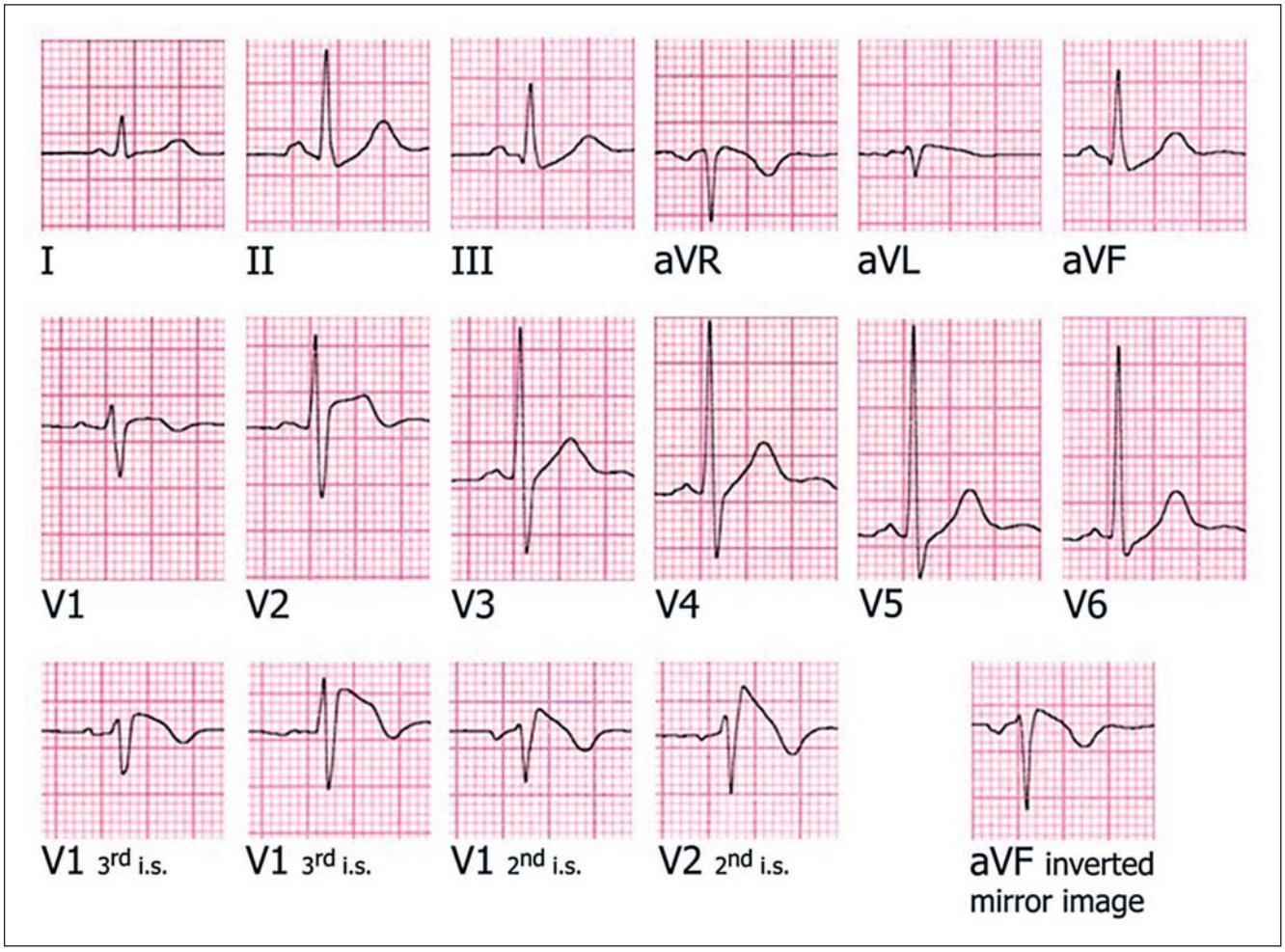

Fig. 1 – In this case BP could not be revealed without analyzing the limb leads, since V1 and V2 recorded at 4th ics are almost normal, whereas the inferior leads show a clear ascending ST segment depression. Displacing V1 and V2 at the 3rd and 2nd ics a clear type 1 BP appeared.

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