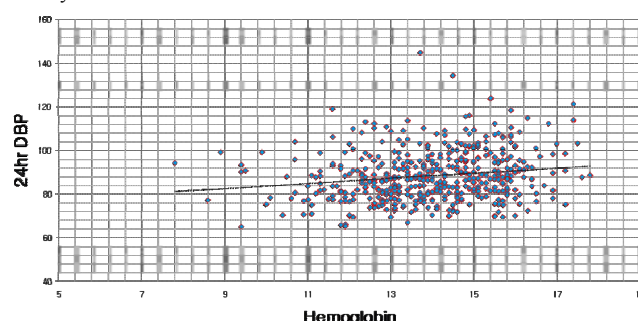


## Hemoglobin is associated with diastolic blood pressure in patients with ABPM

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**Background:** It has been hypothesized that an increased hemoglobin level elevates blood pressure (BP). This study investigated the association between hemoglobin level and BP in patients with ambulatory BP monitoring (ABPM). **Methods:** The study included 465 consecutive patients from January 2008 to May 2013. All patients underwent ambulatory BP monitoring and hemoglobin level was measured. **Results:** In the study population, 57.9% were men and the mean age was 50.4 years ( $\pm 13.6$  years). In baseline characteristics, hemoglobin was associated with age ( $p < 0.001$  [ $r = -0.206$ ]), hs-CRP ( $p < 0.001$  [ $r = -0.191$ ]), uric acid ( $p < 0.001$  [ $r = 0.347$ ]). In ABPM parameters, it was associated with 24hr diastolic BP (DBP) ( $p = 0.001$  [ $r = 0.160$ ]), 24hr mean BP ( $p = 0.002$  [ $r = 0.145$ ]), daytime DBP ( $p < 0.001$  [ $r = 0.206$ ]), Daytime mean BP ( $p = 0.001$  [ $r = 0.158$ ]), and nighttime DBP ( $p = 0.001$  [ $r = 0.126$ ]). Also It was related with 24hr SBP standard deviation (SD) ( $p = 0.028$  [ $r = -0.102$ ]), 24hr heart rate SD ( $p < 0.001$  [ $r = 0.194$ ]), daytime SBP SD ( $p = 0.002$  [ $r = -0.144$ ]), daytime heart rate ( $p = 0.003$  [ $r = 0.136$ ]), nighttime heart rate SD ( $p < 0.001$  [ $r = 0.191$ ]). **Conclusion:** The results show that hemoglobin level is positively associated with diastolic blood pressures. The underlying biological mechanism for the reported associations are not yet elucidated, but it may be possible by increased blood viscosity, vasoconstriction by erythropoietin, some effect of rennin-angiotensin-aldosterone system.



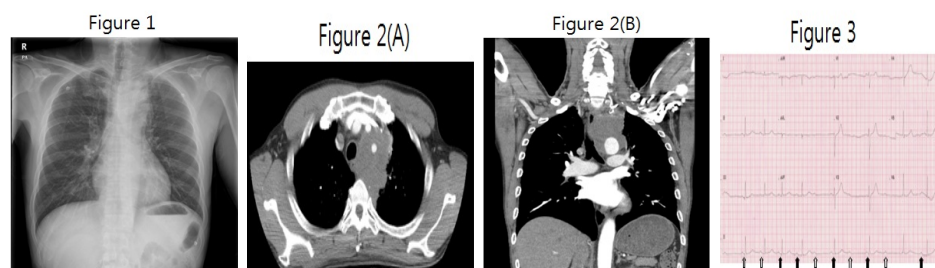
## 반복된 실신으로 발현한 비소세포 폐암 1예

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Although syncope is a common problem, lung cancer rarely presents with episodic syncope. We herein report a case of syncope as the initial presentation of the mediastinal lung cancer. A 54-year-old man presented to the emergency department after episode of syncope. On arrival, His blood pressure was 60/39 mmHg and pulse rate was 35 beats per minute. The 12 leads electrocardiogram showed marked sinus bradycardia with 2:1 degree AV block. After treatment with intravenous administration of atropine and isoproterenol infusion, he recovered. The image studies revealed mediastinal tumor with lymphadenopathy which was pathologically confirmed as the adenocarcinoma of lung cancer. He was treated with chemotherapy and radiation therapy and no further syncopal attacks were observed. This case emphasizes the importance of an appropriate evaluation and broad differential diagnosis for patients with episode of syncope.

**Key words:** lung cancer, adenocarcinoma, syncope, sinus bradycardia



**Figure 1.** The chest x-ray demonstrated mediastinal widening with suspected soft tissue lesion at left apex (arrows).

**Figure 2.** Axial (A) and sagittal (B) reformatted CT images demonstrating extension of mediastinal mass in left supraclavicular, left paratracheal, retrotacheal and prevascular areas (white arrow).

**Figure 3.** the 12 leads electrocardiogram on arrival to emergency department revealed marked sinus bradycardia with 2:1 atrioventricular block. The electrocardiogram showed a blocked P wave (white arrow) and a conducted P wave (black arrow).