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## Research Article

### EVALUATION OF AGE DETERMINATION CASES

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Cardiac; tamponade; death; autopsy.

#### ABSTRACT

**Introduction:** Detecting a person's real age constitutes one of the studying area of forensic science experts. Age determination must be done at unidentified persons' deaths, persons who haven't ability of self expression but in our country it's being done at criminal responsibility detection, state of mind's detection, sexual assault cases, starting the school or job, joining the army and most events concerning person's life, because of not keeping reliable birth records.

**Materials and methods:** 100 cases which applied to our department were taken to our study. Cases which are applied to our department physical examinations (height, weight, seconder sex characteristics occurance, number of teeth) were done, then PA wrist, AP and lateral elbow, AP shoulder and PA pelvis graphies were requested from radiodiagnostic department.

**Results:** 22 of 100 cases which were come under of our study is male, if it's looked to their identity card ages, males are mostly 17 with five cases and females are mostly 14with 24 cases. Average age is 15.3, male average age is 16,2 and female average age is 15. It attracted the attention via negotiation with people and investigation of sending documents, 35 (35%) cases are sent to our department because of young age illegal marriage. It was detected that one of the cases is 8 years older than his/her id card age, 2 of them are 7 years older than their id card age, 19 each are 2 and 3 years older than their id card age; totally 69 cases' (69%) detected ages are older than id card age, 24 cases'(24%) detected bone age are compatible to their id card age, 5 cases (5%) are smaller than their id cars age.

**Conclusion:** We must be careful, because of the looking closure of epiphysis at long bones in age detection from bone, many factors have effects on epiphysis closure like socioeconomic statement, race, nutrition, etc. Besides, references had to be made at age detection for multicolored Turkish.

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#### INTRODUCTION

Detecting a person's real age constitutes one of the studying area of forensic science experts. Age determination must be done at unidentified persons' deaths, persons who haven't ability of self expression but in our country it's being done at criminal responsibility detection, state of mind's detection, sexual assault cases, starting the school or job, joining the army and most events concerning person's life, because of not keeping reliable birth records. Briefly because of the reason that age has a big importance at social relationships and legal issues, a person's age determination is asking to forensic science experts by judicial authorities or personal apply<sup>1,2</sup>.

Criteria using for age determination at forensic medicine practices, are different physical growth signs like heighth, weight, secondary sex characters evolutions, dental and bone developments. Age detection by bone growth is the one of the most common methods but it's affected by many factors like gender, race, endocrin disorders, nutrition, systemic diseases<sup>1,3</sup>.

This study were designed in the purpose of presenting features of cases which are sent to our department for age detection.

#### MATERIALS-METHODS

100 cases which applied to our department were taken to our study. Cases which are applied to our department physical examinations (height, weight, seconder sex characteristics

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occurrence, number of teeth) were done, then PA wrist, AP and lateral elbow, AP shoulder and PA pelvis graphics were requested from radiodiagnostic department.

**RESULTS**

22 (22%) of 100 cases which were come under of our study is male, 78 (78%) of them is female, if it's looked to their identity card ages, males are mostly 17 with five cases and females are mostly 14 with 24 cases.

Applied 100 cases average age is 15.3, male average age is 16,2 and female average age is 15. It attracted the attention via negotiation with people and investigation of sending documents, 35 (35%) cases are sent to our department because of young age illegal marriage Three of the applicants had never have an id card and their application reason was having an identity card. 16 cases were asked for opinion about if they're twins or not by court. 5 alleged criminals sent us to learn if their identity card age is true or not. One of the cases which sent us by court was pregnant, so necessary investigations cancelled to postpartum period. It was detected that one of the cases is 8 years older than his/her id card age, 2 of them are 7 years older than their id card age, 19 each are 2 and 3 years older than their id card age; totally 69 cases' (69%) detected ages are older than id card age, 24 cases'(24%) detected bone age are compatible to their id card age, 5 cases (5%) are smaller than their id cars age.

Two of the 16 cases which were asked for opinion about if they're twins or not by court has detected as same age. All of the cases were physically similar to each others as much as siblings. In the case that they're not maternal twins, discrimination with DNA test is not possible. So it's indicated that medically comment cannot be done.

15 (15%) of the our cases were constituted by sexually abused children.

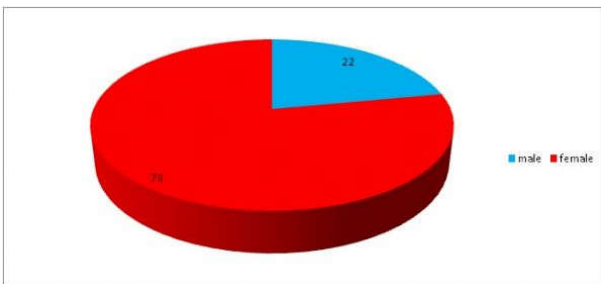


Figure 1 Applicants' male and female distribution

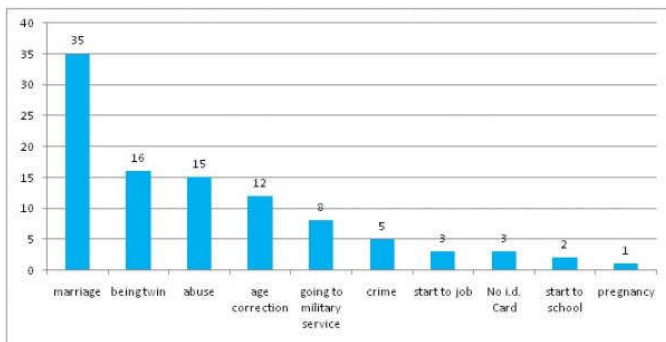


Figure 2 Age Detection application reasons

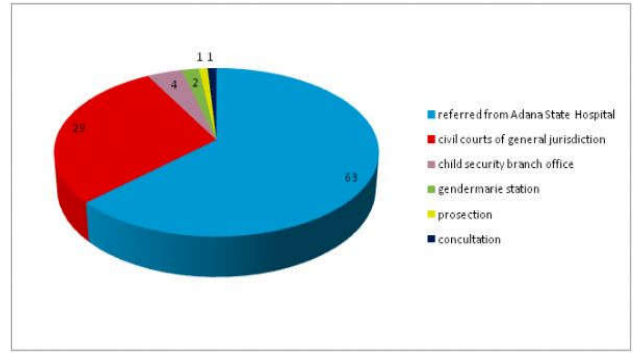


Figure 3 Sent Establishments

Table 1 Applied cases' identity card ages

Identity card ages	10	11	12	13	14	15	16	17	18	19	20	Don't have id card
Male	1	1	1	7	24	20	11	5	5			3
Female	1			3	1	3	2	5	4	1	2	

Table 2 Difference between the id ages and detected of cases

id card ages →	9	10	11	12	13	14	15	16	17	18	19	20
+8					1							
+7		1				1						
+6								1				
+5					1	2		1				
+4				1	4	4	3					
+3				2	1	2	7	2	1	4		
+2					2	7	8	2				
+1						2	4	3	1			
compatible to registry extract	1				1	4	1	6	6	2	1	2
-1	1								1	2		
-2								1				
↑ detected age difference												

Table 3 Pontificated age and detected bone age at illegal marriages

Pontificated age → Detected age ↓	15	16	17	18	19	20	21	22	Don't know own age
14			1						
15									
16		4	2	1					
17	1	1	1	3	2				
18			1	6	2	1			1
19			1	1	1				
20					1				
21						1	1	1	1
22									

**DISCUSSION**

In our country especially in the countryside, registers of persons aren't done reliably so because of different reasons people is applying to courts for age detection or people is sending to us for age detection by courts. Due to these reasons, in our country, age detection is usually done from alives<sup>4,5</sup>. Physicians responsibility is increasing for the fact that reduction of age affects the criminal sanctions<sup>1</sup>.

Age detection is opened subject to abusing, it's seen that most of the cases are applying for the reasons of marriage, getting a job, etc.<sup>3,6</sup>. In our study, 35 cases (35%) for marriage, 8 (8%) cases for joining the military service, 3 (3%) cases for getting a job applied to us.

Arslan M. M. and friends made a research at Hatay with the datas of the year 2007. In their research the chronologic age and detected age by healthcare commission is same at the 3 cases of 116 age detection lawsuits, in the other cases reported age is older<sup>7</sup>. At the research which was done at Adana; pelvis graphies are analyzed of 79 cases between the ages of 16-22 whose have no suspicions about their chronological age. 100% of 16 year old cases' bone ages, 81,8% of 17 years old cases' bone ages, 88,2% of 18 years old cases' bone ages, 84,6% of 19 years old cases' bone ages and 80% of 20 years old cases' bone ages are compatible with the end of 22 years old<sup>8</sup>.

In our study, 69% of cases' bone ages are older than id card age and it's compatible with the literature findings. A research which was done at Düzce between the years of 2001-2003, for going to military service 38 (28.4%) cases, for marriage 27(20.1%) cases took first two places age detection reasons which documented by prosecution letter<sup>2</sup>. In our study similarly; it's observed that, 8 (36%) of 22 male cases applied for going to military service and 35 (45%) of 78 female cases applied for the marriage.

## CONCLUSION

We must be careful, because of the looking closure of epiphysis at long bones in age detection from bone, many factors have effects on epiphysis closure like socioeconomic statement, race, nutrition, etc. Besides, references had to be made at age detection for multicolored Turkish.

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