SPRAWOZDANIA ARCHEOLOGICZNE 68, 2016 PL ISSN 0081-3834

Wanda Kozak-Zychman*, Janusz Winiarczyk**

THE BURIALS OF CHILDREN IN THE FUNNEL BEAKER AND GLOBULAR AMPHORA CULTURES IN THE LUBLIN REGION

ABSTRACT

Kozak-Zychman W., Winiarczyk J. 2016. The burials of children in the Funnel Beaker and Globular Amphora cultures in the Lublin Region. Sprawozdania Archeologiczne 68, 107-120.

The paper presents the characteristics of burials of children in the Funnel Beaker (FBC) and Globular Amphora cultures (GAC) in the Lublin region. Only in two cases the remains of children were discovered in FBC settlements. In both cultures, in addition to the graves grouped on cemeteries, there were also single burials. Graves frequently had various constructions (usually stone), but also those of earth and graves without any at all were discovered.

In FBC burials, the age groups of the same relative abundances, and thereby the largest, are a group of children — $Infans\ I$ (1-7 years) and a group of adults — Adultus (20-30 years), while in GAC it is a group of adults — Adultus. A significant deficiency of the burials of children in both cultures was found by comparing their empirical proportion with expected attendance. The differences between FBC and GAC in cumulative distributions of relative abundances of different age groups, assessed by use of Kolmogorov-Smirnov test, proved to be statistically insignificant at this stage of the research. In both cultures more children were buried in multiple graves. In the case of FBC the children were buried in a supine position, with the head facing west, while in the GAC they were found on their side, with the head facing west or south-east. Only a few, single burials of FBC children, in contrast to multiple burials, contained grave goods. In GAC most single and multiple burials contained grave goods.

Key words: structure of life/structure of complete mortality, burials of children, FBC, GAC, Lublin region Received: 23.01.2015; Revised: 20.02.2015; Accepted: 10.05.2016

^{*} Institute of Archaeology, Maria Curie-Skłodowska University, Maria Curie-Skłodowska sq. 4, 20-031 Lublin, Poland; asterion@plusnet.pl

^{**}Krańcowa st. 106/8, 20-320 Lublin, Poland; winiarczyk.janusz@gmail.com

INTRODUCTION

Research subjects related to the burials of children in past epochs are by no means new. In 2003, the issues of mortality in prehistory and in historical times, its causes, as well as subjects related, among others, to the status of children in local communities and its reflection in funeral rites, were the subject of the 6th Meeting in Museum of the First Piasts at Lednica (Dzieduszycki and Wrzesiński 2004). A lot of interesting information about the importance of research on the remains of children and related difficulties of an objective and subjective nature are contained, among others, in an article of Tomasz Kozłowski's (2004, 79-80). Issues directly related to the topic of the burials of children in the Neolithic are the subject of articles by Joanna Pyzel and Iwona Sobkowiak-Tabaka (2004, 333-340) as well as Piotr Włodarczak (2004, 241-351).

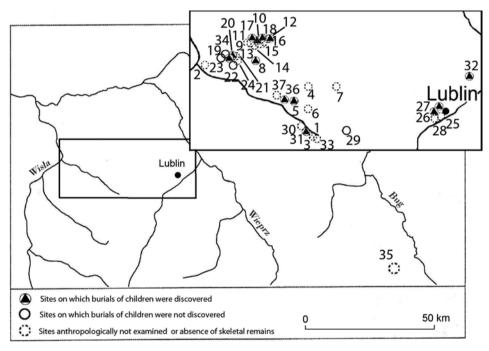


Fig.1. Location of FBC sites in Lublin Region (map: Kozak-Zychman, Szeliga 2004); graphic design: Czerwińska) 1 – Antopol, 2 – Bochotnica, 3 – Bochotnica Kolonia, 4 – Bronice, 5 – Chruszczów Kolonia 1, 6 – Drzewce Kolonia 1, 7 – Gutanów, 8 – Karmanowice 35, 9 – Klementowice II, 10 – Klementowice IV, 11 – Klementowice V, 12 – Klementowice VI, 13 – Klementowice IX, 14 – Klementowice XI, 15 – Klementowice XII, 16 – Klementowice XIII, 17 – Klementowice IV, 18 – Las Stocki A, 19 – Las Stocki B, 20 – Las Stocki C, 21 – Las Stocki D, 22 – Las Stocki E, 23 – Las Stocki F, 24 – Lublin – LSM, 25 – ul. Gliniana 13, 26 – Lublin-Sławinek I, 27 – Lublin-Sławinek II, 28 – Lublin-Sławinek, ul. Harcerska 33, 29 – Miłocin-Kolonia, 30 – Nałęczów "Cypel", 31 – Nałęczów Kolonia, 32 – Pliszczyn 9/77, 33 – Sadurki, 34 – Stok B, 35 – Strzelce Kolonia, 36 – Wąwolnica 7, 37 – Zgórzyńskie (part of Wąwolnica village)

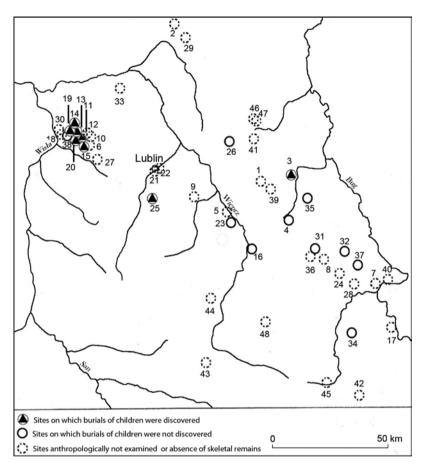


Fig. 2. Location of GAC sites in Lublin Region (map: Kozak-Zychman, Szeliga 2004; graphic design: Czerwińska) 1 – Bezek, 2 – Branica Suchowolska, 3 – Czułczyce Kolonia 6, 4 – Depułtycze Kolonia 12, 5 – Dobryniów Kolonia, 6 – Drzewce, 7 – Husynne Kolonia 6, 8 – Huta, 9 – Kębłów, 10 – Klementowice A, 11 – Klementowice B, 12 – Klementowice D, 13 – Klementowice IV, 14 – Klementowice XV, 15 – Klementowice 47, 16 – Krasnystaw 8, 17 – Kryłów, 18 – Las Stocki C (Stok), 19 – Las Stocki G, 20 – Las Stocki 7, 21 – Lublin-Czwartek, 22 – Lublin-Podzamcze, 23 – Łopiennik Dolny Kolonia, 24 – Miedniki, 25 – Mętów 6, 26 – Nadrybie-Dwór 3, 27 – Nałęczów, 28 – Obrowiec, 29 – Okalew, 30 – Parchatka, 31 – Poniatówka, 32 – Raciborowice, 33 – Rudno, 34 – Sahryń 1, 35 – Serebryszcze 23, 36 – Stadarnia, 37 – Stefankowice Kolonia 33, 38 – Stok A, 39 – Stołpie, 40 – Strzyżów, 41 – Świerszczów 27, 42 – Tarnoszyn, 43 – Tereszpol, 44 – Tworyszów, 45 – Wola Gródecka, 46 – Wytyczno, 47 – Wytyczno Kolonia, 48 – Zamość

In different historical periods, childhood was defined in a similar way. In ancient times the division for time periods was adopted, which are the multiplication of the number 7, according to which the first two meant childhood. In the classical Roman division *pubertia* (childhood) – was the period from birth to 15th year of age. According to the first Polish periodization of ontogenesis, proposed in 1809 by Jędrzej Śniadecki, childhood is also

closed by the number 14 (Cieślik *et al.* 1985, 460-461). In modern anthropological research the divisions of Rudolf Martin are most often used, in which *Infans I* covers the period to 6-7, and *Infans II* to 12-14 year of age (Martin and Saller 1957, 431).

The subject of this paper are the problems of the burials of children during the Neolithic and Eneolithic period in the Lublin region in the communities of FBC and GAC that inhabited this area between the first half of IV and mid-III millennia BC (Szmyt 1999, 77; Włodarczak 2006, 33, 59).

So far in the Lublin region about 37 FBC sites of a funeral nature are known (Fig. 1), in which 287 graves containing the skeletal remains of 263 individuals were discovered. Anthropological analyses were performed for 156 individuals from 17 sites.

There are 48 GAC sites, located in the studied region (Fig. 2) in which the skeletal remains of 77 individuals in 69 graves were discovered. Anthropological analyses were performed for the bones of 51 dead, from 18 sites.

The burials of the FBC and GAC populations in the Lublin region mostly come from cemeteries. Single graves were discovered less frequently. Only in sites Lublin Sławinek I (Kapica and Kozak-Zychman 1982) and Pliszczyn 9/77 (Chmielewski and Zakościelna 2011) were the remains of children buried in settlements found.

MATERIAL AND METHODS

The material basis for research were the graves of the FBC population from the Lublin region, containing the skeletal remains of 156 individuals, and the graves left by the population of the GAC with remains of 51 skeletons.

Comparative material were the burials of the population of Lublin-Volhynian culture, which to a large extent covered the Lublin region, with a similar chronology to the southeastern group of FBC (Bronicki *et al.* 2004, 121-123; Zakościelna 2006, 90; 2010; 35).

The age structure of the dead in FBC and GAC was analysed in groups broadly corresponding to the classification proposed by Martin (Martin and Saller 1957), with the additional division of *Maturus* into three 10-years classes and with a separation of children who died in the first year of life from *Infans I*. Individuals from the borderline of categories (e.g. *Infans I/Infans* II) were evenly underestimated into contiguous classes, and dead adults (more than 20 years) – proportionally, i.e. in accordance with their observed distribution (Piontek 1977, 40). The tables of complete mortality – also called tables of life – were constructed for both cultural groups. The parameters of these tables and methods for their calculation are contained in numerous works, e.g. Piontek (1985, 242-243), Czub (1985, 247-250), Chamberlain (2006, 29-31).

The differences in the distributions of relative abundances (d_x) of particular age groups in both cultures were assessed by use of the Kolmogorov-Smirnov test, assuming 5% risk of error, i.e. 95% confidence level.

On the basis of the structure of life (the structure of complete mortality) of individuals over the age of 15, the expected fraction of children buried at FBC and GAC cemeteries was calculated (Henneberg 1975, 1976, 1977; Henneberg and Piontek 1975).

In the next part of the study, the percentage of single burials of children and multiple burials were determined and compared, taking into account the number and age of accompanying persons.

Furthermore, the skeletons of children were compared in terms of their arrangement and orientation in relation to sides of the world, and the direction in which the head faced most frequently was identified. The documentation of research and its publications often lacks information about orientation of the dead and thus sometimes it was necessary to make recourse to the attached figures.

Another issue included in the study was the presence of burial goods in graves containing the remains of children.

RESULTS

Among the dead from FBC burials, the two largest groups – equally numerous – were children *Infans I* who died between 1-7 and adults of 20-30 years, while in GAC burials it was adult individuals *Adultus*, died between 20 and 30 year of age (Fig. 3).

Furthermore the life expectancy of newborn (e_x^0) for populations of FBC and GAC was similar, while for individuals aged 20 years (e_{20}^0) the calculated values differ significantly (Tab. 1 and Tab. 2). In comparison with other Neolithic populations of Europe they are

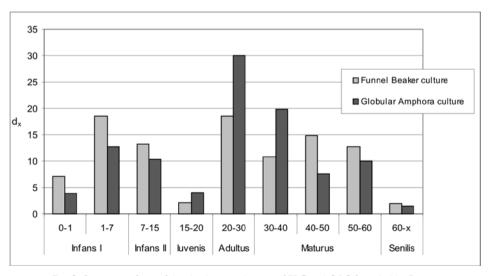


Fig. 3. Structure of age of the dead in populations of FBC and GAC from Lublin Region

Age	D _x	d _x	l _x	q _x	L_x	T _x	e _x °
0-1	11,0	7,1	100,0	0,071	96,5	2596,6	26,0
1-7	29,1	18,6	92,9	0,202	501,6	2500,1	26,9
7-15	20,8	13,3	74,3	0,179	541,2	1998,5	26,9
15-20	3,2	2,1	61,0	0,034	299,8	1457,3	23,9
20-30	29,0	18,6	58,9	0,316	496,0	1157,5	19,7
30-40	16,8	10,8	40,3	0,268	349,0	661,5	16,4
40-50	23,3	14,9	29,5	0,505	220,5	312,5	10,6
50-60	19,8	12,7	14,6	0,870	82,5	92,0	6,3
60-x	3,0	1,9	1,9	1,000	9,5	9,5	5,0

Table 1. Table of life for FBC population in Lublin Region

Table 2. Table of life for GAC population in Lublin Region

Age	D _x	d _x	l _x	$\mathbf{q}_{\mathbf{x}}$	$\mathbf{L}_{\mathbf{x}}$	T _x	e _x °
0-1	2,0	3,9	99,9	0,039	98,0	2665,0	26,7
1-7	6,5	12,7	96,0	0,132	537,9	2567,0	26,7
7-15	5,3	10,4	83,3	0,125	624,8	2029,1	24,4
15-20	2,1	4,1	72,9	0,056	354,3	1404,3	19,3
20-30	15,3	30,0	68,8	0,436	538,0	1050,0	15,3
30-40	10,1	19,8	38,8	0,510	289,0	512,0	13,2
40-50	3,9	7,6	19,0	0,400	152,0	223,0	11,7
50-60	5,1	10,0	11,4	0,877	64,0	71,0	6,2
60-x	0,7	1,4	1,4	1,000	7,0	7,0	5,0

lower and this applies primarily to GAC (Henneberg *et al.* 1982, 134; Piontek and Marciniak 1990, 30-31; Lorkiewicz 2012, 34).

In a comparison of cumulative relative abundances (d_x) in distinguished groups of age, the largest difference became apparent at the category $Infans\ II$, and its value is 11.9. It means, that almost 12% more of the dead younger than 15 were buried in FBC cemeteries. However, at this stage of research, this difference should be considered as statistically insignificant (accidental), taking into account the 5% risk of error.

Children ($Infans\ I + Infans\ II$), in comparison with juveniles and adults (from Iuvenis to Senilis), in FBC accounted for more than 1/3, and in GAC less than 1/3 of group. An even smaller share of children – only slightly more than 16%, were recorded in burials of the Lublin-Volhynian culture, which represents less than 1/6 of studied population (Zakościelna 2010, 78-79).

Children up to 7 years old (*Infans I*) represent more than 1/4 of the entire FBC community buried in the studied area, and in the GAC in the same age interval, there were about 9% fewer. In age group *Infans II* the difference is not so clear, as it is less than 3%.

The expected fraction of children on FBC cemeteries is in the range from 52% to 59%, which means a "deficiency" from 13% to 20%, whereas in the case of GAC, the frequency of deaths of individuals aged 0–15 years should range from 43% to 51% of all dead. In that case the empirical number is lower by almost 16% for the first, and 24% in relation to the second value (Winiarczyk 2014, 48-50).

In collective graves of FBC in the Lublin region the skeletal remains of 32 children were discovered, while 26 children were buried individually. 6 GAC collective graves contained the remains of 9 children, and 3 children were discovered in individual burials. In Lublin-Volhynian culture, graves with individual burials prevailed, accounting for 79,7%. In the last case, the graves contained both adults and children. Other graves were double -15,2% and triple -5,1% (Zakościelna 2010, 66-70). The summaries in the quoted publication indicate that *Infans* individuals represented 15,8% of all those buried in multiple graves.

Analysing the proportion of individuals in distinguished groups of age, and assuming that each of them is 100%, it appeared that both in FBC, as well as in GAC children were more frequently buried in multiple graves. The dead aged over 15 years were more frequently buried together with other individuals in GAC communities.

Similar conclusions can be drawn from the analysis if the total number of burials for selected age groups (100%) are taken as a point of reference. At the same time, the difference in the way of burial of individuals over 15 years old was more clearly marked as in FBC they were buried individually almost twice as often, while in GAC they were more than twice as likely to be found in multiple graves.

In multiple graves of the FBC both solitary children, as well as children with adults, were buried. In the case of GAC, all children were accompanied by older individuals. So far there has not been any grave recorded from this cultural unit containing the remains of only children.

Among the 156 burials of FBC, in more than 1/3. i.e. 54 dead, there was a lack of information about the arrangement of skeleton, including for 31 children. In the remaining 102 cases, prevailed the supine position, and concerned 97 individuals (95,1%). There were 24 children (24,7%) in this group. Only in three cases was the burial of child in a side position observed, including two on the right side – Karmanowice 35, grave 20 and Nałęczów Kolonia, grave 11, and one on the left side – Klementowice XIV, grave 10 (Gurba 1969, 80-82; Nogaj-Chachaj 1988, 27; Uzarowiczowa 1970, 500-501).

Among 51 GAC burials, for more than half, that is 26, skeletal array was not determined, including 9 children burials. In the remaining 25 cases (96%) the arrangement in a flexed-side position prevailed. In this group there were three children (12%). Only in one case – Klementowice 47 – is it known that the child was buried in a supine position (Nogaj-Chachaj 1996, 25).

For a total number of 156 FBC burials, in 49 cases the arrangement of the head of the dead is unknown. In the remaining 107 cases, the most common was a western direction (64-59,8%). This applies both to adult men and women, as well as to individuals undetermined in terms of sex, including juveniles and children (approx. 30%).

In the GAC, for a total number of 51 burials, the arrangement of the head is unknown in 17 cases. In the remaining 34 cases the most numerous directions was: western and south-western (in 25%). Slightly fewer of the dead were buried with their head facing east (21,9%) and north (20,6%). For more than half of the children there is lack of information about the orientation of the head. Among the remaining 6 – three of them were buried with the head facing south-east, two to the west and one to the east.

In FBC burial goods were found in 124 graves (43,2%) of 287 discovered. In 145 cases (50,5%) grave goods were not recorded, and for 18 graves (6,3%) there is a lack of data.

For 55 (undoubtedly defined) burials of children in FBC, 26 were buried in single graves, of which only four contained grave goods. In 21 cases (80,8%) burial goods were non-existent, and in one case (3,8%) no information was given.

In the case of four burials of children in FBC – in one of the graves, no. 1 of Karmanowice 35 (Nogaj-Chachaj 1988, 27) snail shells were found, in the second – grave XX, Stocki Forest B (Nosek 1957, 227) – a burnt flint projectile point, in the third – grave 19, Nałęczów Kolonia (Gurba 1969, 86-88) – two small tools and parts of two vessels, while in the fourth – Grave 6B of Klementowice IV (Halicki 1970, 313) – an amphora.

For 32 multiple burials of FBC, in which the remains of children were present, in 20 cases (62,5%) grave goods occurred, in 9 cases (28,1%) its presence were not recorded, and in three cases (9,3%) there is no data (Winiarczyk 2014, 56). With regard to the type of burials containing grave goods, in most cases there are no grounds to clearly resolve for which of the dead they were offered. An unquestionable example is grave 13 of Nałęczów Kolonia, containing the remains of two children, where next to the skeletons fragments of vessels and flint flakes were found (Gurba 1969, 83-84).

In the case of GAC, burial goods were present in 64 graves (92,7%) of 69 discovered. Of the remainder, in 4 cases it is unsure if they contained grave goods – a lack of data - and in one grave non artefacts were discovered (Winiarczyk 2014, 56).

In the GAC three children were buried singly, and 10 with another individual or individuals. Beyond one individual burial, in all other graves containing the remains of children, burial goods were present. The abovementioned exception is the individual burial (grave 2) discovered in Mętów (Nogaj-Chachaj 2006, 27). A clear example of a multiple grave, in which burial goods were added directly next to the child – vessels and amber ornaments – is the grave discovered at site 47 in Klementowice (Nogaj-Chachaj 1996, 25).

In the GAC individual graves, the burial goods of children were usually limited to fragments of vessels or flakes of flint. Another situation was observed in the case of multiple burials, with the participation of an adult. Then, generally, the burial goods were richer (Winiarczyk 2014, 56).

In the case of two single GAC graves containing remains of the children – in one – grave IV, Klementowice B (Nosek 1967, 271) – three vessels were present, and in the second – grave 1, Klementowice IV (Halicki 1970, 303-305) – fragments of vessels, four axes and animal bones.

In single graves of children in the Lublin-Volhynian culture, artefacts were discovered in three burials. In addition to the grave from Gródek 4, these were 2 graves from village Książnice 2 and grave 1 of Moniatycze Kolonia 1. Burial goods in graves of children, as well as juveniles and adults, were mostly objects of clay and flint (Zakościelna 2010, 188-189).

DISCUSSION

One of the main issues related to the burials of children, and not just in prehistory, are their relatively small number among the total discovered (Piontek 1979, 74-86; Lewis 2006, 88). Attempts to clarify the "deficiency" of children in cemeteries of the Middle Ages and modern times can be found in the literature (Duma 2010, 15-97).

The differences in empirical and expected percentages undoubtedly arise for many reasons, including weaker level of preservation of skeletons of children in comparison to adults, the structure of soil in which the remains were deposited, construction of graves, and sometimes – the shallow depth of grave. The impact on the deficiency of the remains of the children on discussed Neolithic cemeteries had, perhaps, also different way of treatment (reflecting the social relations), e.g. burying outside the cemetery (Jerszyńska 1985, 282; Lorkiewicz 2012, 37). In the discussion on the small number of skeletons of children (and women) on prehistoric cemeteries have occurred the reviews stating their higher mortality, resulting from hardships related to the movement of human groups. "Perhaps it may be that children and women often were used as a complement of food deficiencies" (Gładykowska-Rzeczycka 1973, 289-290).

The number of burials of children in Neolithic cultures of Europe, according to various researchers, range from 1% to 44% (Pyzel and Sobkowiak-Tabaka 2004, 333; Włodarczak 2004, 341). Other results indicate the authors, who analyse the data for Neolithic in Poland: from 13% (Gładykowska-Rzeczycka 1973, table VII, 295) to about 23% (Kozak 2004, 228; Włodarczak 2004, 347).

The skeletal remains from FBC sites were poorly preserved, only 2,6% of skeletons were complete. An interesting and difficult to explain aspect is the fact that most of this group were children (three of four burials). In the case of the GAC, the level of preservation was also unsatisfactory, because only 5,9% of the skeletons were complete. Only one skeleton of the child was discovered in a good condition (one of three). Much more well-preserved skeletons were found in sites of the Lublin-Volhynian culture – up to 31%.

In analyses of mortality, it is a common, although debatable, practice to calculate the probable rate of deaths of children on the basis of the structure of age of the dead aged over

15 years old, and a comparison of the results with the empirical data. The obtained results illustrate the scale of the deficiency of the burials of children. It also accepts the stagnant nature of the population and assumes that the average woman in her reproductive period gives birth to 6-7 children (Henneberg 1975; 1976; 1977; Henneberg and Piontek 1975).

Some researchers suggests different ages of dead children, at various cemeteries of studied epoch, , which conditioned (or allowed) their burial along with other members of community (Pyzel and Sobkowiak-Tabaka 2004, 333-334). It is difficult to unequivocally determine whether such relationship can be applied to the burials of the FBC and GAC populations although it seems unlikely. In fact, on sites of both cultures there occurred burials of children who died at different ages, including newborns and infants, both buried individually – e.g. FBC: Karmanowice 35 (Nogaj-Chachaj 1991, 637-638; Kozak-Zychman and Wolińska 1991; Kozak-Zychman and Tajer 1995), GAC: Klementowice B (Nosek 1967, 223-224), as well as with older individuals – e.g. FBC: Klementowice XIV (Uzarowiczowa 1970, 494), GAC: Las Stocki 7 (Śmiszkiewicz-Skwarska and Mazur 1989, 55-58). It is possible, however, that the aforementioned "principle" was not always used or applied everywhere used.

In the light of the analysis conducted, as well as by the results of studies of other authors, it is also difficult to trace the principles concerning the arrangement of the dead in the burial pit. Anna Uzarowiczowa, the researcher on FBC and GAC cemeteries in the Lublin region, stated that "it could be noticed only a certain advantage" of the orientation and arrangement of burials (1970, 507).

Another disputable issue are the presence of grave goods in burials of children, both in individual, as well as multiple graves.

Joanna Pyzel and Iwona Sobkowiak-Tabaka (2004, 336) argue, that grave goods in burials of children in FBC are no different from the goods added to the graves of adults. However, they stipulate that if it occurs – it is "a special case".

Both in relation to the FBC and the GAC it is extremely difficult to determine whether the object was offered to an adult or to the child. However, if individual graves of children do not always contain burial goods, it is more likely that the goods in multiple graves belonged to adults.

CONCLUSIONS

FBC and GAC burials of children in Lublin region mostly come from cemeteries and rarely from single graves. Only on two FBC sites were the remains of children found within the settlements. The burials of the Lublin-Volhynian culture population come from cemeteries, single graves and settlements.

Children in the FBC and the GAC were buried in a similar way to the adults. In both cultures in the Lublin region, the final resting place, beyond stone constructions, were also grave pits without any structure. If stone constructions occurred, they were very varied. In

the case of the Lublin-Volhynian culture, flat burials were most common, without any structural components.

In the FBC graves, children of *Infans I* accounted for 25,7%, and *Infans II* - 13,3% while in GAC graves there were far fewer children, *Infans I* - only 16,7% and *Infans II* - 10,4%. A small percentage of the burials of children - 16,5% were also discovered in graves of the Lublin-Volhynian culture.

The further life expectancy of newborn $(e_x^{\ o})$ for populations of the FBC and the GAC are similar, while for individuals aged 20 years $(e_{20}^{\ o})$ the calculated values differ significantly.

Assessed by use of the Kolmogorov-Smirnov test, differences between the FBC and the GAC in terms of the cumulative distributions of relative abundances for particular groups of age, have proved to be statistically insignificant at the current stage of research.

According to the calculations, the expected rate of deaths of children in GAC should be approximately half, and in the case of FBC more than half of all of the dead. The confrontation with empirical frequency indicates a significant deficiency in both cultures.

In FBC burials, the supine position of the arrangement of the dead prevailed, both in the case of adults, as well as children. Only in three cases were the burials of children in a side position recorded. For the GAC the most common was the arrangement of the dead in a flexed position. Only in one case was a child placed in a supine position. In the Lublin-Volhynian culture the children were buried in the same way as the adults, i.e. in a side position.

The most common orientation of the head of the dead in FBC burials was a western direction. At the same time, in more than half of cases it concerned individuals *Infans I* and *Infans II*. In the GAC the western and south-eastern directions were most numerous. Half of the children were oriented with their head facing to the south-east. In the graves of the Lublin-Volhynian culture, juveniles and children generally were arranged with the head facing south or south-east (Zakościelna 2010, 92).

Less than half of the FBC graves contained burial goods. For 25 individual graves of children, artefacts were only discovered in three. Among the multiple burials with the participation of children, nearly 2/3 of them contained grave goods. In the GAC, burial goods were present in the vast majority of the graves, including the burials of children. Only in one single grave of a child were there no burial goods. In the case of the Lublin-Volhynian culture, for 138 discovered graves, no burial goods were deposited in only three cases. Among five single burials of children, grave goods were present in three.

The results presented in the study indicate that in regard to the treatment of the dead children in the FBC and the GAC, it is hard to find different ways, except that the larger percentage of them were recorded in multiple graves and where more often than in single burials (but only in the case of the FBC) grave goods were present.

Practices related to the burials of children in the FBC and the GAC in the Lublin region are similar, in this regard, to those applied on other areas inhabited by these cultures.

References

- Bronicki A., Kadrow S. and Zakościelna A. 2004. Uwagi na temat wzajemnych relacji chronologicznych późnej fazy kultury lubelsko-wołyńskiej oraz kultury pucharów lejkowatych z uwzględnieniem najnowszych wyników badań w Zimnie. In J. Libera and A. Zakościelna (eds.), *Przez pradzieje i wczesne średniowiecze. Księga Jubileuszowa na siedemdziesiąte piąte urodziny docenta doktora Jana Gurby*. Lublin: Wydawnictwo UMCS, 101-125.
- Chmielewski T. and Zakościelna A. 2011. Dokumentacja końcowa z ratowniczych badań archeologicznych stanowiska Pliszczyn 9/77 (AZP 76/82), gm. Wólka, pow. Lublin, wykonanych w związku z realizacją drogi ekspresowej S17, część 3, na odcinku węzeł "Lubartów" węzeł "Włodawa". Lublin. Maszynopis w Pracowni Badań i Nadzorów Archeologicznych w Lublinie.
- Chamberlain A. T. 2006. Demography in Archaeology (= Cambridge Manuals in Archaeology), Cambridge University Press.
- Cieślik J., Drozdowska M. and Malinowski A. 2005. Etapy rozwoju osobniczego człowieka. In A. Malinowski and J. Strzałko (eds.), *Antropologia*. Warszawa–Poznań: Państwowe Wydawnictwo Naukowe, 460-490.
- Czub R. 1985. *Ilościowy opis stanu i dynamiki populacji ludzkich*. In A. Malinowski and J. Strzałko (eds.), *Antropologia*. Warszawa-Poznań: Państwowe Wydawnictwo Naukowe, 228-254.
- Duma P. 2010. *Grób alienata. Pochówki dzieci nieochrzczonych, samobójców i skazańców w późnym średniowieczu i dobie wczesnonowożytnej.* Kraków: Wydawnictwo AWALON T. Janowski Sp. j.
- Dzieduszycki W. and Wrzesiński J. (eds.). 2004. *Dusza maluczka a strata ogromna* (= Funeralia Lednickie. Spotkanie 6). Poznań: Stowarzyszenie Naukowe Archeologów Polskich o. Poznań.
- Fletcher M. and Lock G.R. 1995. *Archeologia w liczbach. Podstawy statystyki dla archeologów*. Poznań: Wydawnictwo Naukowe UAM.
- Gładykowska-Rzeczycka J. 1973. Próba przedstawienia problematyki paleodemograficznej na terenie Polski od czasów najdawniejszych do V w. n.e. *Archeologia Polski* 18(2), 279-325.
- Gurba J. 1969. Materiały kultury czasz (pucharów) lejowatych z okolic Nałęczowa w pow. puławskim, *Studia i Materiały Lubelskie* 4, 67-99.
- Halicki M. 1970. Cmentarzysko kultury amfor kulistych i kultury pucharów lejkowatych w Klementowicach, pow. Puławy na stanowisku IV, *Wiadomości Archeologiczne* 35(3), 303-311.
- Henneberg M. 1975. Notes on the reproduction possibilities of human prehistoric populations. *Przegląd Antropologiczny* 41, 75-89.
- Henneberg M. 1976. Reproductive possibilities and estimations of the biological dynamics of earlier human population. *Journal of Human Evolution* 5, 41-48.
- Henneberg M. 1977. Proportion of dying children in paleodemographical studies: estimation by guess or by methodical approach. *Przegląd Antropologiczny* 43, 105-114.
- Henneberg M, Kaczmarek M. and Szymandera W. 1982. Charakterystyka grupy ludności kultury amfor kulistych na podstawie analizy szczątków kostnych z Chodzieży. *Przegląd Antropologiczny* 48 (1-2), 131-143.

- Henneberg M. and Piontek J. 1975. Biological state index of human groups, *Przegląd Antropologiczny* 41, 191-201.
- Jerszyńska B. 1985. Badania antropologiczne cmentarzysk pradziejowych a próby interpretacji stosunków społecznych w archeologii. In J. Piontek and A. Malinowski (eds.), *Teoria i empiria w polskiej szkole antropologicznej, W 100-lecie urodzin Jana Czekanowskiego* (= *Seria Antropologia* 12). Poznań: Wydawnictwo Naukowe Uniwersytetu im. Adama Mickiewicza, 279-290.
- Kapica Z. and Kozak-Zychman W. 1982. Opracowanie antropologiczne szczątków kostnych kultury pucharów lejkowatych ze stanowiska I i II w Lublinie-Sławinku, *Wiadomości Archeologiczne* 47(2), 231-238.
- Kozak J. 2004. Przemiany w umieralności dzieci na terenie ziem polskich od neolitu do współczesności. In W. Dzieduszycki and J. Wrzesiński (eds.), Dusza maluczka a strata ogromna, (= Funeralia Lednickie. Spotkanie 6). Poznań: Stowarzyszenie Naukowe Archeologów Polskich o. Poznań, 225–230.
- Kozak-Zychman W. and Tajer A. 1995. Analiza antropologiczna materiałów kostnych z cmentarzyska kultury pucharów lejkowatych w Karmanowicach (stan. 35), gm. Wąwolnica, woj. Lublin (bad. 1993 i 1994). Maszynopis w Instytucie Archeologii UMCS w Lublinie.
- Kozak-Zychman W. and Wolińska K. 1991. Analiza antropologiczna materiałów kostnych z cmentarzyska kultury pucharów lejkowatych w Karmanowicach (stan. 35.), gm. Wąwolnica, woj. Lublin (bad. 1987-1991). Maszynopis w Instytucie Archeologii UMCS w Lublinie.
- Kozłowski T. 2004. Szczątki dziecięce w antropologii historycznej. In W. Dzieduszycki and J. Wrzesiński (eds.), *Dusza maluczka a strata ogromna* (= *Funeralia Lednickie. Spotkanie* 6). Poznań: Stowarzyszenie Naukowe Archeologów Polskich o. Poznań, 79-85.
- Lewis M. E. 2006. The Bioarchaeology of Children: Perspectives from Biological and Forensic Anthropology (= Cambridge Studies in Biological and Evolutionary Anthropology 50). Cambridge University Press.
- Lorkiewicz W. 2012. Biologia wczesnorolniczych populacji ludzkich grupy brzesko-kujawskiej kultury lendzielskiej (4600-4000 BC). Łódź: Wydawnictwo Uniwersytetu Łódzkiego.
- Martin R. and Saller K. 1957. Lehrbuch der Antropologie I. Stuttgart: Fischer.
- Nogaj-Chachaj J. 1988. Cmentarzysko kultury pucharów lejkowatych w Karmanowicach, stan. 35, gm. Wąwolnica, woj. Lubelskie. In J. Gurba (ed.), Sprawozdania z badań terenowych Katedry Archeologii UMCS w 1988 roku. Lublin, 27-31.
- Nogaj-Chachaj J. 1991. The stone-packed graves of the Funnel Beaker culture in Karmanowice, site 35, *Antiquity* 65 (248), 628-639.
- Nogaj-Chachaj J. 1996. Grób kultury amfor kulistych na stanowisku 47 w Klementowicach, gm. Kurów, woj. lubelskie. *Archeologia Polski Środkowowschodniej* 1, 25-29.
- Nogaj-Chachaj J. 2006. Wstępne wyniki badań grobów kultury amfor kulistych na stanowisku 6 w Mętowie, pow. lubelski. *Archeologia Polski Środkowowschodniej* 8, 23-29.
- Nosek S. 1957. Materiały do badań nad historią starożytną i wczesnośredniowieczną międzyrzecza Wisły i Bugu. *Annales Universitatis Mariae Curie-Skłodowska* 6, sec. F. (1951).

- Nosek S. 1967. Kultura amfor kulistych w Polsce (= Prace Komisji Archeologicznej 8). Wrocław Warszawa Kraków: Ossolineum.
- Piontek J. 1977. Średniowieczne cmentarzysko w Słaboszewie koło Mogilna. Analiza wymieralności, *Przegląd Antropologiczny* 43(1), 37-53.
- Piontek J. 1979. *Procesy mikroewolucyjne w Europejskich populacjach ludzkich* (= *Seria Antropolo- qia* 6). Poznań: Wydawnictwo Naukowe im. Adama Mickiewicza, 74-86.
- Piontek J. 1985. *Biologia populacji pradziejowych. Zarys metodyczny*. Poznań: Wydawnictwo Naukowe im. Adama Mickiewicza.
- Piontek J. and Marciniak A. 1990. Struktura antropologiczna a kulturowe strategie adaptacyjne populacji neolitycznych w Europie Środkowej (= Seria Antropologia 16). Poznań: Wydawnictwo Naukowe Uniwersytetu im. Adama Mickiewicza.
- Pyzel J. and Sobkowiak-Tabaka I. 2004. Problematyka dzieci w archeologii neolitu wybrane aspekty. In W. Dzieduszycki and J. Wrzesiński (eds.), *Dusza maluczka a strata ogromna* (= *Funeralia Lednickie*. *Spotkanie* 6). Poznań: Stowarzyszenie Naukowe Archeologów Polskich, 333-340.
- Śmiszkiewicz-Skwarska A. and Mazur G. 1989. Ekspertyza antropologiczna pochówku kultury amfor kulistych (KAK) z Lasu Stockiego (stan. 7, woj. lubelskie), *Lubelskie Materiały Archeologiczne* 2, 55-58.
- Szmyt M. 1999. Between West and East. People of the Globular Amphora Culture in Eastern Europe: 2950-2359 BC (= Baltic-Pontic Studies 8). Poznań: Institute of Eastern Studies and Institute of Prehistory Adam Mickiewicz University.
- Uzarowiczowa A. 1970. Cmentarzysko kultury pucharów lejkowatych na stanowisku XIV w Klementowicach, pow. Puławy, *Wiadomości Archeologiczne* 35(4), 492-514.
- Winiarczyk J. 2014. *Pochówki dzieci w okresie środkowego neolitu na Lubelszczyźnie*. Lublin (Maszynopis w Instytucie Archeologii UMCS w Lublinie).
- Włodarczak P. 2004. Pochówki dzieci w kulturze ceramiki sznurowej na przykładzie cmentarzysk z Wyżyny Małopolskiej. In W. Dzieduszycki and J. Wrzesiński (eds.), *Dusza maluczka a strata ogromna* (= *Funeralia Lednickie. Spotkanie* 6). Poznań: Stowarzyszenie Naukowe Archeologów Polskich, 241-351.
- Włodarczak P. 2006. Chronologia grupy południowo-wschodniej kultury pucharów lejkowatych w świetle dat radiowęglowych. In J. Libera and K. Tunia (eds.), *Idea megalityczna w obrządku pogrzebowym kultury pucharów lejkowatych*. Lublin Kraków: Instytut Archeologii i Etnologii PAN, oddział w Krakowie, Instytut Archeologii UMCS w Lublinie, 27-66.
- Zakościelna A. 2006. Kultura lubelsko-wołyńska. Zagadnienia jej genezy, periodyzacji i chronologii/ The Lublin-Volhynian Culture. The problems of its origin, periodization and chronology. In M. Kaczanowska (ed.), Dziedzictwo cywilizacji naddunajskich: Małopolska na przełomie epok kamienia i miedzi/The danubian Heritage: Lesser Poland at the Turn of the Stone and Copper Ages. Kraków: Muzeum Archeologiczne, 77-94.
- Zakościelna A. 2010. *Studium obrządku pogrzebowego kultury lubelsko-wołyńskiej*. Lublin: Wydawnictwo Uniwersytetu Marii Curie-Skłodowskiej.